NOTES ON PRE-NIGHTINGALE NURSING: WHAT IT WAS AND WHAT IT WAS NOT

Thesis submitted by

TANYA GAI LANGTREE

RN, BNSc (JCU), PGDipAdvClinN(NeuroSc) (UniMelb),
PGCertNSc(IntCare) (JCU), MNSt (JCU)

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James Cook University

Advisory team

Professor Melanie Birks

Dr Narelle Biedermann

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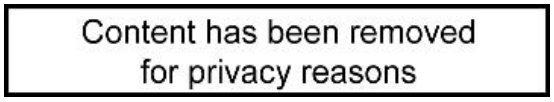

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Statement of the Contribution of Others

The contributions of others are outlined in Table P1. The table identifies the extent and nature of the collaboration with individuals throughout the research process.

Table P1: Contribution of others

Nature of assistance	Contribution	Name and affiliation
Intellectual support	Proposal writing Research design Research process Data analysis Thesis writing Publication preparation Conference presentations	Professor Melanie Birks College of Healthcare Sciences, James Cook University Dr Narelle Biedermann College of Healthcare Sciences James Cook University
Financial support	Research costs	Discretionary budget allocation: Staff/student Partial travel subsidiary: Centre for Rural and Remote Health, James Cook University
Thesis presentation	Professional editing of final thesis	Elite Editing, Adelaide, South Australia Editorial intervention was restricted to Standards D and E of the Australian Standards for Editing Practice

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I rediscovered my love of The Beatles during the many hours spent conducting this research. Their music was a constant companion during the exhilarating and trying times of this study. After hours of listening to their music, I believe there is a Beatles lyric that represents every emotion felt and opinion formed about this experience. Throughout this section and the broader thesis are a smattering of lyrics that capture the essence of my thoughts about this study.

(Now) and now my life has changed (my life has changed)

in oh-so-many ways (my independence),

My independence seems to vanish in the haze.

Lennon & McCartney, 1965/2009a, track 1

First, I am extremely thankful for my esteemed advisors, Professor Melanie Birks and Dr Narelle Biedermann. I feel privileged to have had you as supervisors. I chose this lyric to sum up our relationship during this study. In many ways, surrendering my independence was the biggest hurdle in this project. For me, asking for help was by far more of a reach than the translation and reading of foreign sources. I am so grateful that you were so insightful and figured out my *modus operandi*—you both knew when I needed guidance, when you could push me and when to sit back. I will cherish our many shared laughs during our supervision meetings. Thank you for recognising that I am not the 'hand-holding' type; the type of support and guidance you gave me is exactly what I needed for this project. Melanie, thank you for giving me a copy of *Instruccion de Enfermeros* and your suggestion that it might be something worth studying. Without that corridor conversation, this PhD would not have happened. I sincerely thank you for your brilliant research wisdom and supervision. I greatly appreciate your eye for editing and your ability to pull me out of the many rabbit holes I encountered along

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What would you think if I sang out of tune?
Would you stand and walk out on me?
Lend me your ears and I'll sing you a song,
And I'll try not to sing out of key.

Lennon & McCartney, 1967/2009, track 2

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I love you, I love you, I love you,

That's all I want to say.

Lennon & McCartney, 1965/2009b, track 7

Well, not quite. The final thanks go to my family. Mum and Dad, thanks for instilling a strong work ethic in me and teaching me the importance of staying grounded. These two qualities have been instrumental throughout my studies and professional life. Achieving a good education and the opportunities that have accompanied it would not have been possible without these traits, along with, of course, your unwavering love and belief in me. Thanks for 'grandparenting' my menagerie of pets when I was away from home during the PhD. It was an incredible emotional (and financial) relief to know that you were caring for my fur-babies at these times, particularly when I know how mischievous they can be sometimes. To my sister Belinda and her fiancé Chris, thanks for providing comedic relief and support from afar. Your humorous banter and well wishes were a very welcome distraction and source of support.

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more extreme space provided by living 900 km apart in 2016 and 2017. Thank you for this sacrifice. I know it has been challenging for our relationship at times. I am also deeply appreciative of your frequent, often thankless, encouragement and help. These ranged from physical tasks, like packing and unpacking for three house and office moves during the PhD, to providing useful prods, such as reminding me that PowerPoint presentations are best finished before travelling to conferences and listening to my frustrations and meltdowns at times of stress. Finally, I am eternally grateful that you understood why completing a PhD is an important life goal of mine—this is something we have achieved together.

Abstract

The professionalisation of nursing is commonly attributed to Florence Nightingale's (1820–1910) work during the mid-nineteenth century. Nightingale's contributions to nursing in this period were numerous and include her seminal book *Notes on Nursing: What It Is and What It Is Not* (1859) and the establishment of secularised nurse training at St Thomas' Hospital, London in 1860. While such contributions advanced the profession, the continual reverence for Nightingale and her achievements has generated a dominant discourse on the state of pre-Nightingale nursing—that nurses prior to Nightingale's reforms were devoid of skills, discipline and structure. As a result of this discourse, minimal research has been conducted on pre-Nightingale nursing practice.

Using historical methods, this study addressed this gap by exploring the progression of nursing theory and praxis prior to Nightingale's reforms. Underpinned by the philosophies of interpretivism and postmodernism, a combination of traditional and emerging historical methods was used to analyse a corpus of digitised primary sources that describe early nursing practice. Methods employed for source collection and evaluation included the development and use of a scoping review protocol, online searching and source criticism. Data derived from the collected sources were thematically analysed to develop the conceptualisation of early nursing theory and praxis.

The scoping review located 24 sources that detailed early nursing practice between the sixteenth and mid-nineteenth centuries. To situate the synthesis and interpretation of the corpus, a synopsis of each source is first presented, in which the bibliographical details and key content and contextual information are described. Analysis of the corpus identified that fundamental nursing praxis was considered a 'thousand nameless acts of kindness and attention' (Waddy, 1846). Quotidian pre-professionalised nursing work was complex and targeted three domains

of care: *restoring health, preventing complications* and *promoting comfort.* These domains of care formed the main themes of the study.

The first theme, restoring health, explored nursing interventions that were provided to restore a patient's health to their pre-morbid health status via the reinstatement of humoral balance. These interventions included preparation and administration of therapeutic agents and performance of or assistance with specialised clinical procedures. The second theme, preventing complications, identified nursing cares that were performed to limit the risk of complications in the patient in each stage of their illness. Promoting comfort, the final theme identified in the corpus, described nursing interventions that were performed to assist the patient to maintain dignity and improve emotional and spiritual wellbeing.

This collective conceptualisation articulates the nature of early nursing work and highlights that the pre-professionalised nurse had a broad scope of practice that was influenced by corresponding advances in scientific and medical knowledge. These findings encourage the nursing profession to reframe its understanding of early nursing praxis by disrupting the popular discourse of Nightingale's achievements and contributions to nursing. Further, they highlight persistences in nursing praxis that challenge assumptions of how the profession views, informs and transforms contemporary practice. Recommendations from this study will assist the profession to better understand its past, and in doing so, provide the opportunity to resituate the present and future directions of nursing.

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List of Abbreviations

&c.	etcetera
c.	circa
ADL	activities of daily living
CAM	complementary and alternative medicine
CT	cupping therapy
HREC	Human Research Ethics Committee
HT	human translation
JCU	James Cook University
MT	machine translation
n.d.	no date
POW	prisoner of war
s.l.	publication location unknown (derived from the Latin expression *sine loco*)
s.n.	publisher unknown (derived from the Latin expression *sine nominee*, 'without a name')
sic	derived from the Latin expression *sic erat scriptum* (indicates that the transcription of the preceding word or phrase mirrors the original source)
viz.	derived from the Latin word *videlicit* (its meaning is similar to the adverb 'namely')
US	United States
WWI	World War I
WWII	World War II

Glossary

Terms that are pertinent to this thesis and/or terms that may be unfamiliar to the reader are explained below to ensure the author's use and intention of meaning is clear to the reader.

Activities of daily living (ADLs)	Refers to self-care activities performed daily, including bathing, grooming, dressing, eating, mobilising, toileting and hygienic cares (Pérez Mármol et al., 2018).
Antebellum	Relating to the time before a war, especially the American Civil War (Antebellum, 2020).
Apoplexy	A stroke or cerebrovascular insult (i.e., a haemorrhagic or ischaemic stroke). It is derived from the ancient Greek term *apoplexia*, meaning 'to strike suddenly' or 'struck down violently' (Engelhardt, 2017; Schutta & Howe, 2006). Until the modern era, apoplexy was an umbrella term used to describe a number of neurological disorders in which a sudden loss of consciousness was experienced (e.g., seizures or meningitis; Engelhardt, 2017). As autopsies became more common in the seventeenth century, 'apoplexy' was progressively used to exclusively describe a stroke (Engelhardt, 2017). The contemporary classification of stroke subtypes (i.e., ischaemic, intracerebral haemorrhagic and subarachnoid haemorrhagic) were all identified by numerous European anatomists during this period (Engelhardt, 2017; Schutta & Howe, 2006).
Apothecary	A person who prepared and sold medicines. During medieval and modern periods, an experienced nurse sometimes assumed the role of the apothecary in continental Europe. This role has been taken over by pharmacists in contemporary health care.
Barber-surgeon	Barber-surgeons were key healthcare providers in medieval and early modern periods. An apprenticeship model was used to train novices to perform surgery (e.g., amputations) and other procedures, such as bloodletting, leeching, cupping and teeth extraction (Bagwell, 2005). By the nineteenth century, the vocation had been largely discredited because of its oppression by the medical profession. This oppression was achieved by education and policy reforms, such as the introduction of

	surgical training in medical education, legislative reforms and political lobbying (Garrison, 1931; Stephens-Borg, 2010).
Bloodletting	Bloodletting (also known as venesection) is procedure in which a lancet is used to cut the superficial veins of a sick person's arm to facilitate the removal of blood (Schmidt, 2006). Between 20 and 35 oz of blood were thought to be removed during a session (Turk & Allen, 1983).[1] Bloodletting has been practised for at least 2,000 years, and was once considered a common therapy to 'treat almost every complaint' (Cumming, 1853, p. 242). Bloodletting was believed to be most effective in treating inflammatory conditions (e.g., fever and sepsis), hypertensive conditions (Lovett, 1986; e.g., apoplexy and pre-eclampsia) and hypervolaemia (Cumming, 1853; Post, 1968; Turk & Allen, 1983). By the mid-nineteenth century, the efficacy of bloodletting was questioned by Western physicians, leading to a gradual decline in its use in the United Kingdom, United States and other Western cultures. Today, bloodletting is considered a complementary and alternative medicine (CAM) that is still used throughout Asia, the Middle East and some parts of Europe (Lee, Hong, Lee, Yoon, & Choi, 2017). The common cold, hypertension and chronic obstructive pulmonary disease are some conditions for which CAM practitioners use bloodletting therapy (Lee, Hong et al., 2017; Xiong, Wang, & Li, 2018).
Brother	A male member of a Christian religious congregation who is not ordained to priesthood. Brothers normally take three vows: chastity, poverty and obedience (Catholic Vocations Ministry Australia, 2019).
Cataplasm	An alternative term for poultice.
Close reading	The process of critically reading and analysing one source at a time.
Clyster	An archaic term for enema.
Congregation	A group of men or women who share a common religious faith. The group lives in a community and members take lifelong vows. The congregation is self-governed according to the group's constitutions (Catholic Diocese of Maitland-Newcastle, n.d.).
Consumption	An archaic term for tuberculosis.

[1] 20 oz is equivalent to 1 pt or 56 mL.

Corpus	The collection/set of primary sources used for analysis.
Cupping therapy (CT)	A procedure in which small round cups/instruments are placed on the skin to create negative pressure (i.e., a vacuum effect), stimulating blood flow to the treated area (Rozenfeld & Kalichman, 2015).There are several methods of CT, including 'fire cupping' (cups are heated prior to application), 'dry cupping' (cups are applied plainly to the skin) and 'wet cupping' (superficial incisions are made to the skin prior to cup application; Aboushanab & AlSanad, 2018; Rozenfeld & Kalichman, 2015). CT has been practised for several thousand years in Asia, the Middle East and Europe (Qureshi et al., 2017). Beliefs about the mechanism of action in CT differ among cultures. In Eastern cultures, CT is thought to unblock the flow of qi, thereby improving the person's sense of wellbeing (Rozenfeld & Kalichman, 2015). In medieval European and Arabic cultures, CT was thought to detoxify the blood or remove evil spirits from the body (in accordance with humoralism; Qureshi et al., 2017; Rozenfeld & Kalichman, 2015). Historically, CT was used for a variety of acute and chronic conditions, including pain, musculoskeletal disorders, cardiovascular disorders, metabolic disorders, respiratory disorders and urinary tract infections (Qureshi et al., 2017) By the nineteenth century, the use of CT had declined in Western cultures (Qureshi et al., 2017; Turk & Allen, 1983). Today, CT has become a popular form of CAM and is commonly used to treat musculoskeletal pain (Rozenfeld & Kalichman, 2015). It is now believed that CT promotes an anti-inflammatory effect by promoting peripheral circulation and immunomodulation (Aboushanab & AlSanad, 2018).
Distant reading	The process in which textual materials are viewed abstractly to facilitate the discovery of unexpected themes or relationships within a corpus (Moretti, 2005).
Emetic	A medication used to induce vomiting.
French disease	A term once used to describe syphilis.
Hospital	While contemporary definitions of hospitals typically describe a healthcare facility, the use of the term was quite different in medieval and early modern Europe. Medieval European hospitals were facilities that

provided a full range of hospitality services, including accommodating travellers (irrespective of socio-economic status), housing and feeding the poor, providing asylums for the mentally unwell and offering health care to the sick and disabled (Huguet-Termes, 2009).

Humoralism — Humoralism, also referred to as humorism and Galenism, was the prevalent philosophy underpinning European medical practice until the nineteenth century (Bos, 2009). Humoral physiology believed that the human body comprised four elements: blood, yellow bile, black bile and phlegm (Bagwell, 2005). Each humor incorporated innate qualities regarding the temperature (hot or cold) and hydration level (dry or moist) (Bagwell, 2005). The humors were also believed to influence an individual's character, as reflected in them adopting either a sanguine, choleric, melancholic or phlegmatic temperament (Bos, 2009). Good health was dependent on the four humors being dynamically balanced. Illness was thought to arise when this balance was disturbed (Qureshi et al., 2017).

Injection — The archaic meaning of injection referred to a medicine administered into the body by a syringe or any other instrument (Johnson, 1832). Hence, it did not necessarily refer to parenteral medications.

Julep — A soothing drink made from sugar syrup that also contains a medicament.

Leeching — The application of medicinal leeches (*Hirudo medicinalis*) as a therapeutic remedy dates back to 1500 BCE (Munshi, Ara, Rafique, & Ahmad, 2008). In keeping with humoralistic beliefs, leeching was thought to remove the 'bad blood' from the body so that the four humors' equilibrium could be restored (O'Hara, 1988; Whitaker, Rao, Izadi, & Butler, 2004). As leeching did not require the barber-surgeon to cut the person's vein with a lancet, it was considered a less aggressive method of bloodletting (Whitaker et al., 2004) Leeching was once used to treat numerous acute and chronic conditions, including insomnia, mental illnesses, headaches, hearing loss, stomach ailments, obesity and gout (O'Hara, 1988; Turk & Allen, 1983; Whitaker et al., 2004). During the nineteenth century, leeching peaked and rapidly declined in Europe because of supply problems and advancements in medical knowledge

	(Whitaker et al., 2004). In recent years, leeching has re-emerged as a legitimate therapeutic procedure following microsurgery to facilitate the drainage of venous blood in replanted digits and other extremities (e.g., ear lobes) or to reduce venous congestion in free tissue flaps post-reconstructive surgery (O'Hara, 1988).
Maravedi	Coins used as currency in medieval Spain (Arnold-Baker, 2001).
Medicament	A substance or remedy used for healing.
Medieval period	Also known as the Middle Ages; occurred between the fifth and fifteenth centuries.
Miasmic theory	The belief that diseases were caused by inhaling 'corrupt' air that had been exposed to decaying or diseased matter (e.g., rotting corpses, food, animals, waste sewage or the exhalation of people who were infected; Halliday, 2001). 'Miasma' was first used in the seventeenth century; however, the belief of 'bad' or 'corrupt' air has its origins in Greco-Roman times (Karamanou, Panayiotakopoulos, Tsoucalas, Kousoulis, & Androustsos, 2012).
Modern era/ period	The period in European history following the late Middle Ages and the beginning of the industrial revolution (i.e., between the late fifteenth and late eighteenth centuries).
Natural evacuations	An archaic term used to describe the normal excretion of body fluids, such as urine, faeces, menstrual blood and perspiration.
Patient	A person receiving health care. Synonyms for 'patient' include healthcare recipient, consumer and client (Australian Commission on Safety and Quality in Health Care, 2017, p. 74). For consistency, patient is used throughout this thesis.
Person-centred care	Care that is respectful of, and responsive to, an individual's preferences, needs and values. Person-centredness is the foundation for safe and effective care (Australian Commission on Safety and Quality in Health Care, 2018).
Physic	An archaic term used to indicate a medicine (particularly purgatives) or to treat a condition with a medicine.
Poultice	A topical agent, normally soft and moist (e.g., clay or meal), that is applied to the skin to treat a range of conditions. Before being applied the

	skin, the soft material is added to or wrapped in a cloth and may have been heated; also known as a cataplasm (Poultice, 2015).
Pre-professionalised nursing	Nursing that took place prior to the 1860s and 1870s reforms that led to nursing's professionalisation.
Purgative	A formal term for a laxative or cathartic medicine.
Receipt	An archaic term for recipe.
Secular	Not having any connection with religion (Secular, 2020).
Scope of practice	The extent of individual clinician's approved clinical practice within an organisation. It is based on their skills, knowledge, performance and the needs and service capability of the organisation (Australian Commission on Safety and Quality in Health Care, 2017, p. 75).
Spanish fly patch	A blistering vesicatory made from dried Spanish flies (*Lytta vesicatoria*). These beetles produce cantharidin—a blistering agent.
Temperament	Humoralist medicine believed that there were four types of temperaments—sanguine (blood), melancholic, phlegmatic (lymphatic) or choleric (bilious). A person's temperament was determined after considering their physical and personality traits and the composition of their body's 'solids and liquids' (Murray, 1870, p. 15).
Tisane	Herbal tea.
Vesicatory	A medication applied topically to induce inflammation and/or blistering.

Prologue: The Researcher in this Research

Christ! You know it ain't easy, you know how hard it can be,

The way things are going, they're going to crucify me.

Lennon & McCartney, 1969/2009, track 23

Needing to find my own answers to understand why differences exist has been an ongoing trait throughout my life. Early on, this need resulted in a passion for learning about different cultures, languages and political beliefs. Reflecting on when this interest was sparked, it is evident that my worldview was shaped by childhood experiences. During my early years, my family moved every couple of years around Australia because my father was in the Royal Australian Navy. When my father discharged from the navy, we settled in his hometown of Proserpine, a small country town in the Whitsundays. We lived in Proserpine for the next decade until my schooling finished.

During this time, my father was away for six months of each year as he worked as a marine engineer sailing between Australia, New Zealand and northern Asia. As a child, I was acutely aware that our family was non-traditional, especially compared with those who were born and bred in North Queensland. By life's circumstances, we were different. For half the year, while working as a full-time nurse, my mother admirably reared my sister and myself single-handedly (from my sister's birth in 1974 until I finished school in 1996). Birthdays and Christmases were often delayed or missed by my father; however, when he was home, we had a stay-at-home dad who assumed many domestic duties. Again, this lifestyle was rather novel in country Queensland in the 1980s and early 1990s. Immersion in different cultures via overseas trips, consuming exotic cuisines and hearing my parents' anecdotes was the norm in my early life.

When I was 11 years old, we went on a family holiday to Singapore. I remember learning about the fall of Singapore in February 1942 and the failed attempt to prevent Japanese invasion via the British bombing of the causeway that separates Singapore and the Malaysian peninsula. I also learnt about the torturous conditions that our prisoners of war (POWs) endured at Changi, a story even more poignant when I was informed that three of my late grandfather's friends were Changi POWs. In trying to make sense of this event, I started to read about the fall of Singapore and World War II (WWII), particularly in the Asia-Pacific region. Such reading further shaped my worldview and led to my interest in foreign affairs and politics.

While I did not know what I wanted to be when I grew up—for a while it was a professional backpacker—I knew it had to involve travel. Eventually, after giving up the dream of being a professional backpacker, I settled on my somewhat romanticised aspiration of peacekeeping, with a view to becoming a diplomat later in life. Consequently, after leaving school, I joined the Royal Australian Army and commenced officer training while also studying an arts degree majoring in Asian-Pacific studies and modern languages. However, this career was cut short by an ongoing medical condition.

Knowing I could no longer partake in peacekeeping via the military, I needed to take a different career path and 'fell' into nursing. My rationale at the time was that I would be employable and have opportunities for travel. This decision to become a nurse was a rather ironic choice when less than two years earlier, my high school vice-principal—the admirable yet formidable Mrs J—had suggested I consider nursing or medicine rather than professional backpacking. At the time, I thought this suggestion was completely absurd. I remember scoffing at her and informing her rather assertively, 'I don't want to be a nurse or a doctor'. Looking back, I wonder if Mrs J saw something in me that I had not yet identified.

During my undergraduate nursing education, I remained unsure about my career choice. While I enjoyed studying sociology and bioscience, I kept wondering if I should return to the arts and study modern languages. It was not until I was working as a graduate nurse at the Melbourne Neuroscience Centre in the Royal Melbourne Hospital that I truly became comfortable with my career choice. I found neuroscience nursing was my 'calling', particularly caring for neuro-critical care patients. This work was incredibly challenging yet rewarding because of what often seemed to be a revolving door of people who had sustained acute head injuries from physical assaults, traffic incidents or freak accidents. I felt equally challenged by caring for patients who had experienced life-altering conditions, such as devastating strokes or brain cancers. For me, the emotional labour and complexity of nursing interventions required to effectively care for such patients and their significant others was transformative and humbling. These experiences, coupled with the fabulous team of expert nurses and world-class neurosurgeons with whom I worked, shaped my practice as a clinician because I learnt how to balance the art and science of nursing.

After relocating to Queensland, I continued to work in critical care environments before a segue into nursing education. This segue was a 'sliding doors' opportunity in which I received a random telephone call from a then-stranger— Dr Kristin Wicking, a lecturer at JCU—asking if I would be interested in teaching undergraduate first-year nursing students the fundamentals of care. Unbeknown to myself, a dear colleague of mine, the late Loretto Harvey, had recommended me as a suitable laboratory leader to Kristin—and the rest, as they say, is history. This call changed the course of my nursing career and has opened up countless opportunities over the past 15 years, including becoming a lead author of a popular Australian fundamentals of nursing text in 2016. More importantly, however, it has allowed me the incredibly privileged position of teaching the future generations of North Queensland nurses. Thank you Loretto.

Chapter 1: Introduction

1.1 Introduction

The purpose of this chapter is to introduce and provide an overview of this thesis. This chapter begins with the impetus for the study, followed by an overview of existing knowledge on historical nursing texts written prior to nursing's professionalisation in the mid-nineteenth century. The study's aims, questions and significance are then presented, followed by a summary of the methodology, historical research methods and the study design. The researcher's position in the study is then explained. Finally, the chapter concludes with an overview of the chapters contained within this thesis.

1.2 Impetus for the Study

The impetus for this study originated from a corridor conversation with Professor Melanie Birks, my primary thesis advisor. Professor Birks knew that I was wanting to start my PhD but was having difficulty identifying a topic that would interest me for the duration of the study. That fateful day, Professor Birks mentioned she had an English translation of an old Spanish nursing book that I may be interested reading and on which I might possibly conduct research. That day, I was introduced to the second edition of *Instruccion de Enfermeros (Instructions for Nurses*), a seventeenth-century nursing treatise that detailed the routine nursing interventions of the Obregonian Congregation, a small group of Catholic brothers who identified as *enfermeros* (nurses).

After reading only the opening pages of the treatise—coinciding with the section detailing the seventeenth-century principles of pet therapy (more on that later)—I realised how special this little book was. I was 'sold'; it combined my passion for teaching the fundamentals of nursing and my love of history.

When reading *Instruccion de Enfermeros* for the first time, I was amazed at the similarities between how Andres Fernandez, the author of the second edition, described the principles and practices of Obregonian nursing and how we currently teach undergraduate nursing students the fundamentals of care. Fernandez expected his nurses to not only know how to perform a skill, but also to possess the reasoning for performing it. He expected his nurses to conduct themselves at a consistently high standard, yet also recognised the barriers that impeded their ability to provide quality nursing care.

The original premise of this study was to solely examine the extent of *Instruccion de Enfermeros*' influence and place within nursing during the seventeenth century. However, after realising that the content intimated that semi-formalised nursing training had commenced in Spain at least two centuries earlier than the Nightingale-led reformations of the mid-nineteenth century, I was curious to explore if other long-forgotten books detailing nursing practice existed. I began to question why, as a profession, are we largely unaware of our history prior to Nightingale-era nursing and wanted to learn if and how this unfamiliarity with the past has affected current constructs and issues in nursing. I realised that the combination of these two unknowns was worthy of further investigation so that the profession can better understand the legacy of pre-Nightingale nursing on the present and future direction of nursing.

1.3 Situating the Study

Nursing textbooks and manuals continue to be a key resource for supporting the learning of nursing students and novice nurses (Hughes & Quinn, 2013). Nurse educators often prescribe these resources to promote learners' understanding of key theoretical concepts; support the development of psychomotor skills; and inform neophytes of the requisite standards and comportment of the profession (Cline, Manchester, & Tagliareni, 2012; Kleppe, Heggen, & Engebretsen, 2016; Knight, 2015). To remain contemporary, nursing textbooks are regularly

superseded by an updated edition to reflect advancements in theory and praxis (Cassata & Cox, 2009). Accordingly, each edition provides a contemporaneous snapshot of the popular ways of knowing, routine behaviours and expected attitudes of the profession during the period they are used (Boschma, Davidson, & Bonifacio, 2009; Wood, 2009).

The examination of past nursing books proffers an important cultural–historical commentary on nursing's evolving theoretical foundation, principles and practices (Boschma et al., 2009; D'Antonio, 2005). Tracing these elements across different texts and periods enables a historical understanding of how the profession's knowledge base and practice standards have transformed over time in response to shifting sociocultural norms, environmental factors and technological gains. Further, it grants researchers greater insight into the understanding, intent and reasoning of past nurses (Nelson, 2009). In turn, such analyses can assist in debunking some prevailing myths or fallacies about past practice (e.g., the perceived incompetence of early nineteenth-century nurses) by exposing the full scope of their nursing practice (Summers, 1997). Addressing such misconceptions and highlighting factual aspects of past practice strengthens the social legitimacy of nursing (Fealy, Kelly, & Watson, 2013; Nelson & Gordon, 2004).

Despite the apparent advantages of using old manuals and textbooks to examine day-to-day practices of the past, this type of scholarship remains underexplored in nursing research (Jones, Dupree, Hutchison, Gardiner, & Rafferty, 2018). Instead, most historical nursing studies have explored the contextual factors that have shaped nursing (e.g., hospital reforms, professional organisations, war and gender); or have memorialised key nursing leaders (e.g., Florence Nightingale and Mary Seacole; Fealy et al., 2013). Although these studies have contributed to a clearer understanding of the hurdles faced by our predecessors in achieving professionalism, the practice of nursing has been largely ignored—a preterition that arguably 'demonstrates nursing's lack of disciplinary maturity' (Fealy et al., 2013, p. 1881).

The reluctance to examine past practices in nursing may be partly attributable to the profession's unease with accepting its professional status. This perceived reluctance is evidenced by the numerous papers published each year about nursing's professionalisation, with some authors (Ayala, Vanderstraeten, & Bracke, 2014; Çelik, Keçeci, & Bulduk, 2011) continuing to query if nursing meets the criteria of a profession, despite it being over a century since authors such as Messner (1914) and Covert (1917) first raised the question.

The failure to examine past nursing practices may also be a result of the profession's preoccupation with relentlessly reconceptualising key theoretical concepts (Nelson & Gordon, 2004). Contemporary literature demonstrates the existence of ongoing discussions on:

- how knowledge is generated (e.g., praxis gained from clinical experiences versus practice gained through simulation; Curl, Smith, Ann Chisholm, McGee, & Das, 2016; Judd, Alison, Waters, & Gordon, 2016; Roberts, Kaak, & Rolley, 2019)
- how knowledge is implemented (e.g., theory-based practice versus evidence-based practice; Baumann, 2010; Karnick, 2016; McCrae, 2012a, 2012b; Porter, 2010)
- which model of care delivery is most effective (e.g., total patient care/primary nursing, case management or functional/team nursing; Fernandez, Johnson, Tran, & Miranda, 2012)
- which models (e.g., systematic-positivist models, intuitive-humanistic models or shared decision-making models; Krishnan, 2018; Lewis, Stacey, Squires, & Carroll, 2016) and/or attributes are used in clinical decision-making (e.g., experience level, heuristics, intuition, pattern recognition, critical thinking, clinical judgement or clinical reasoning; Johansen & O'Brien, 2016; Krishnan, 2018; Lee, Abdullah, Subramanian, Bachmann, & Ong, 2017; Nibbelink & Brewer, 2018)

- what constitutes care (Feo, Kitson, & Conroy, 2018; Kitson, Muntlin Athlin, & Conroy, 2014).

The common thread throughout all these innovations is the tendency for nursing to reinvent itself through abandonment of past knowledge and practices (Gordon & Nelson, 2005, 2006; Nelson & Gordon, 2004).

A third, more pragmatic reason the merits of this type of scholarship have been previously overlooked relates to the profession's lack of awareness of the existence of early nursing manuals. Nursing commonly views the beginnings of professionalisation as occurring in the mid-nineteenth century. Florence Nightingale is heralded as the founder of modern nursing because of her achievements, such as improving sanitation standards in the Crimean War and the subsequent establishment of the Nightingale Fund for the Training of Nurses in 1857 (Arnone & Fitzsimons, 2015; Clements & Averill, 2006; Dossey, Rosa, & Beck, 2019; Ellis, 2019; Hegge, 2011; Hegge & Bunkers, 2017; Karimi & Masoudi Alavi, 2015; Lee, Clark, & Thompson, 2013; MacMillan, 2012; MacQueen, 2007; Magpantay-Monroe, 2015; McDonald, 2009, 2014a, 2014b, 2018; Winkelstein, 2009). Corresponding with this metanarrative is the belief that nursing care prior to the Nightingale model was rudimentary and lacked clinical or scientific reasoning (Libster & O'Neil, 2009). Such rhetoric has lingering effects today, including the maintenance of an insular view of the origins of nursing praxis that largely ignores nursing work prior to the nineteenth century. It also perpetuates unhelpful stereotypical discourses (e.g., nurses as angels or doctor's handmaidens) that prevail about nurses and the nature of their work (Cleary, Dean, Sayers, & Jackson, 2018; Jinks & Bradley, 2004; Kelly, Fealy, & Watson, 2012; Tierney, Bivins, & Seers, 2019).

1.4 Research Aim

The aim of this research was to conceptualise the progression of nursing theory and praxis in Western countries prior to the nursing reforms of the mid-nineteenth century. Two research questions guided this research:

1. What manuscripts describing nursing practice were produced in Western countries prior to 1859?
2. How was nursing theory and practice conceptualised prior to professionalisation?

1.5 Significance of This Research

Over the last 30 years, a relatively small amount of research has been conducted on pre-Nightingale nursing. Mostly, this research has focused on the general attributes of religious orders[2] or the image of 'unreformed' nurses in England and America.[3] While such studies have provided important insights to significant groups of pre-professionalised nurses, to date, the examination of early nursing theory and practice remains underexplored (Fealy et al., 2013). This failure to explore the evolution of early nursing praxis is detrimental to our current conceptualisations of nursing because historical forces are known to inform, shape and/or constrain current practice (Fairman & D'Antonio, 2013; Lewenson, McAllister, & Smith, 2017).

Conducting this research affords the profession a more informed understanding of pre-Nightingale nursing by generating a collective conceptualisation of pre-professionalised nursing praxis. This conceptualisation also assists the profession to gain a better insight into the

[2] For example, the extensive scholarship of Therese Meehan on the Sisters of Mercy in Ireland; Siobhan Nelson on the Daughters of Charity in France and the Sisters of Charity in Great Britain, Ireland, Australia and the United States; Barbra Mann Wall's and Martha Libster's respective studies on the Sisters of Charity's work in antebellum America.

[3] For example, Carol Helmstadter's substantial scholarship on this era and the numerous studies produced by the 1980s 'revisionists' (e.g., Monica Baly, Christopher Maggs, Annette Summers and Francis Benjamin Smith).

nature of early modern nursing work and highlights the influence of certain ideologies, knowledge, attributes and comportment on current nursing praxis. Further, the study heightens the profession's awareness of the existence of pre-professionalised nursing texts by producing an annotated bibliography of these testaments to our past.

1.6 Study Design

An interpretive approach using postmodernist historical methods was used in this study. Postmodernist historical method was deemed the most appropriate methodology for this study because: a) it is impossible to present a single version of reality or truth (Brown, 2013); and b) the historical researcher's narrative does not simply present objective 'facts' (Breisach, 2007; Donnelly & Norton, 2011). Instead, it acknowledges that the way sources are selected for archiving and later used by researchers can privilege those in power, and that the researcher's language, writing style and incorporation of quotations is never neutral (Donnelly & Norton, 2011). Therefore, adopting a postmodernist approach to this study facilitated a dissociation of my interpretation from the extant metanarratives about pre-professionalised nursing.

The study was designed to adhere to the core principles of historical method, while also introducing different technologies to enhance the rigour and replicability of the study. The study consisted of four phases: development of a scoping review protocol; implementation of the scoping review; analysis and interpretation; and dissemination of findings.

The first phase of this study was the development of a scoping review protocol for data searches and collection. A scoping review was used in this study because I decided to limit my sources to digitised primary documents that described pre-professionalised nursing practice. As little was known of the existence of such texts, I considered that this approach to data collection complemented historical research in the 'digital age' by providing an overt structure to the process of discovery (Hitchcock, 2013; Putnam, 2016).

Phase two of the study was conducting the scoping review. The review involved searching multiple electronic databases (i.e., MEDLINE, Cumulative Index to Nursing and Allied Health Literature [CINAHL], JSTOR and Scopus), online archives (i.e., Google Books, Internet Archive, Hathi Trust Digital Library, Wellcome Library, Project Gutenberg and Europeana Collections) and targeted professional associations for primary and secondary sources that met the eligibility criteria detailed in the protocol. Any secondary sources located by this search underwent additional screening to identify if the author(s) referred to any pre-1860 primary sources about nursing practice. Each located digitised primary source underwent further scrutiny against the eligibility criteria and source criticism. Non-English-language sources included in the study were first translated using a combination of two machine translation tools and manual editing.

The third phase of this study was analysis and interpretation. During this phase, each source was read and analysed individually before being synthesised to form a collective conceptualisation of the scope and breadth of pre-professionalised nursing praxis. Several traditional historical methods were used during this phase of the study, including close reading and the use of footnotes to contextualise the narrative. A number of nascent analysis methods were also utilised including conducting a thematic analysis of the corpus using NVivo 11, a computer-assisted qualitative data analysis (CAQDAS) software program, along with concept mapping and memo-writing.

The final phase of the study was dissemination of the research findings. There were two main ways this dissemination was accomplished: the creation of an annotated bibliography (see Chapter 5) and presentation of a historical narrative on the fundamentals of pre-professionalised nursing practice (see Chapter 6).

1.7 Positioning the Researcher

Qualitative historical studies are at risk of undue researcher influence in terms of ideologies, biases and assumptions about the research topic (Lewenson, 2008). Left unmonitored, such subjectivity may lead to the researcher (often subconsciously) skewing the historical interpretation through mechanisms such as privileging one piece of evidence over another or adopting a creative interpretation of the reconstruction of the past event, epoch or phenomenon (Boschma, Grypma, & Melchior, 2008; Lewenson, 2008). To mitigate this risk, it is essential that historical researchers understand their position in relation to the selected research topic prior to commencing the study. Being conscious of these subjective influences early in the study enables the researcher to closely monitor and limit the impact of such factors on the research process and outcomes. In turn, this increased awareness improves the transparency of the research process to others, allowing readers to be better informed when judging the quality of the research. To understand my philosophical position and potential areas of subjectivity before and during this project, I examined three key areas: my *weltanschauung* (worldview); my professional history; and my prior understanding of the history of nursing.

The term worldview is a calque of the German word *weltanschauung*. *Weltanschauung* is a composition of words *welt* ('world') and *anschauung* ('outlook' or 'view'). *Weltanschauung* was first described in *Critique of Judgement* by Immanuel Kant (1790). However, it did not become popular until twentieth-century philosophers, such as Martin Heidegger, began to analyse its meaning and purpose (Naugle, 2002). Put simply, worldview is an individual's sense of reality (Birks, 2014a). It is the lens through which the individual views the world and is influenced by their beliefs, values, behaviours, attitude and culture (Williams, Dade Smith, & Sharp, 2016). Consequently, life experiences, upbringing and environment influence an individual's worldview (Schlitz, Vieten, & Miller, 2010).

For the researcher, worldview can be viewed as ‘a basic set of beliefs that guides action’ (Guba, 1990, p. 17). Understanding one’s philosophical worldview assists the researcher in selecting the most appropriate paradigm and methodology for the project (Creswell, 2014). Further, the articulation of one’s worldview affords the researcher greater consciousness of personal biases and assumptions that may be present during the study (Creswell, 2014). To analyse my worldview, I used four questions, as suggested by Birks (2014a, p. 24):

- How do you define yourself?
- What is the nature of reality?
- How do you kn*o*w the world, or gain knowledge of it?
- What can be the relationship between the researcher and participant?

After considering these questions, I realised the primary lens through which I view and interact with the world is social consciousness. Social consciousness can be defined as the explicit awareness of how one is situated within society (Schlitz et al., 2010). A socially conscious person acknowledges the dynamism of social systems and structures. They recognise that such structures are easily influenced by a range of contextual, historical and contemporary factors (Ammentorp, 2007). Social consciousness leads to an awareness of civic responsibility to others, particularly those who are marginalised or have experienced persecution (Ammentorp, 2007). By reflecting on my life experiences and interests, I realised that I attempt to make sense of the world by staying abreast of current domestic and foreign affairs through analysing and critiquing the political, sociocultural and historical influences of key events. Thus, I do not normally accept proclamations regarding politics or culture (such as those made in popular media) at face value. Instead, I prefer to do my own research to form my own opinions and feel comfortable in not always following conventional thinking or practice patterns. My healthy scepticism about populist beliefs and my heightened social consciousness have been influenced

by my upbringing (see prologue). Explicating my worldview has helped me identify that this scepticism likely influenced me to adopt a postmodernist lens for this research.

To understand the potential effect of my professional history on the research study, I considered the questions posed by Boschma et al. (2008, p. 99):

- Does my positioning as a nurse affect my choice of research topic?
- Does my nursing background inform my analysis and interpretation?

Reflecting on these questions helped me recognise I have extensive experience in performing, educating and writing about the fundamentals of nursing. This experience assisted with me finally identifying a PhD topic and maintaining enthusiasm for the research.

In terms of performing the fundamentals of nursing, much of my clinical experience was gained through caring for critically ill and often unconscious patients. This type of nursing work allowed me to fully appreciate the importance of the fundamentals of care because my patients typically could not meet their basic human needs, such as performing the activities of daily living. The outcomes of undertaking care for my patients and their significant others was not only observing improved comfort levels, but also realising that these cares provided them with some sense of normality in an otherwise surreal environment. I believe gaining this awareness was, and is, invaluable to how I function as a nurse. Accordingly, this increased awareness helped me to position myself as the researcher in this study by drawing my attention to the humanistic aspects of care that were described in the corpus.

In terms of educating others on the fundamentals of care, 15 years of teaching undergraduate nursing students on the principles and procedural aspects of technical care has provided me with a unique vantage point in understanding how novice nurses learn, and how nursing knowledge and practice evolves over time. During this study, this experience was coupled with

maintenance of my scholarly outputs on the fundamentals of nursing in the Australian literature. These outputs included updating and revising multiple book chapters, assuming editorial roles and reviewing various texts and learning resources. This type of scholarship required me to critique and update or evaluate educational content to ensure it reflects contemporary evidence and best practice guidelines. Continuing my teaching and scholarship while conducting this study has made me more cognisant of the pedagogy used to teach the fundamentals of nursing. This background was invaluable for positioning myself in this research because it honed my ability to detect the subtleties (e.g., unspoken ideologies or habits) of praxis that a non-nurse would not necessarily detect.

The third area I reflected upon prior to the study was my understanding of the history of nursing. My reflection revealed that while I have always had a general interest in history, I was rather ignorant of our profession's history. My knowledge was confined to a basic understanding of the achievements of Florence Nightingale in Scutari; aspects of the Nightingale model of nursing; the plight of Vivien Bullwinkel after the Banka Island massacre in 1942; anecdotes related to me by the late Margaret (Madge) Holmes, a WWII army nurse I met in the 1990s[4] and the 1980s Victorian strikes that led to better working conditions for Australian nurses. This reflection also revealed that despite not being a midwife, I had a far more extensive understanding of midwifery history. I knew about their alleged 'witchcraft' during medieval and early modern periods that led to the execution of countless midwives and was in awe of the birth trainers used to educate peasant women in Europe.[5] Most significantly, I was aware of the oppression of midwifery by medicine and nursing in the nineteenth and twentieth centuries that

[4] Madge served as a lieutenant in the Australian Army Nursing Service in 1942–1946 (National Archives of Australia, 2020). Madge advised me that during her time in the army, she learnt that: 'Not all women should wear shorts, it does nothing for their figures'.

[5] Most notable was the 'the machine' created by Madame Angelique du Coudray (1712–1789), also known as the 'King's Midwife', to train lay midwives across France. The training, commissioned by King Louis XV, helped lower the birth-associated morbidity and mortality rates in France during this period.

led to the profession facing near-extinction in the United States (US; Ehrenreich & English, 2010).

In hindsight, I believe my ignorance of the history of nursing was attributable to a lack of exposure. Like many Australian nurses, I never learnt about the history of nursing during my undergraduate or postgraduate degrees. Instead, my understanding of the evolution of our profession was based solely on popular media and serendipitous life circumstances. For example, I first learnt about Vivien Bullwinkel when watching *Paradise Road*, a 1997 film loosely based on her accounts of Banka Island and as a POW (Nelson, 1999). I discovered more about Vivien's post-WW2 life by chance. While spending time at the Victorian Spinal Cord Service at the Austin Hospital as part of my postgraduate studies, I heard of the technique of 'frog-breathing', an exercise that allowed some individuals with phrenic nerve paralysis (e.g., people with quadriplegia) to remove their ventilator for short periods.[6] I was informed that a physiotherapist who had worked at Fairfield Hospital pioneered this therapy in the 1950s while working with poliomyelitis victims.[7] As a side note, the clinical educator of the spinal unit added that Vivien Bullwinkel had been the matron of Fairfield Hospital for several decades. Intrigued by this information, I read more about Bullwinkel's life. I now realise that this general lack of historical awareness among Australian nurses will continue to perpetuate if nursing leaders and educators fail to prioritise history as a core item of nursing curriculum. Nonetheless, my rudimentary knowledge on the history of nursing was potentially beneficial for positioning me as the researcher in this study because it largely precluded me from adopting preconceived notions about nursing prior to and following the reforms of the mid-nineteenth century.

[6] 'Frog-breathing' is formally known as glossopharyngeal breathing.
[7] Fairfield Hospital was the Victorian Infectious Diseases Hospital. It operated between 1904 and 1996. Fairfield physiotherapist Beatrice Burke wrote a paper that described the mechanics of 'frog-breathing' in 1957.

1.8 Thesis Organisation and Overview

This thesis is organised into nine chapters, as outlined below.

Chapter 1: This chapter has introduced and provided an overview of the study. The impetus for the research and a case for the significance of this study was identified. The research aim, questions and study design were introduced. This chapter concludes with a summary of the researcher's position within the study.

Chapter 2: In this section, the seventeenth-century Spanish treatise, *Instruccion de Enfermeros (Instructions for Nurses)*, is introduced. The analysis of *Instruccion*'s content and context provide an exemplar of pre-professionalised nursing theory and praxis. The themes of this analysis situate the larger study.

Chapter 3: A detailed examination of historical research methods, the methodology used in this study, is undertaken in this chapter. The research paradigms of interpretivism and postmodernism that underpin and guide the research process are described, followed by an overview of Rankean, constructivist and postmodernist historical methods. The justification for using postmodernist historical methods is provided, followed by an overview of the strategies used to increase the rigour of the study.

Chapter 4: This chapter outlines the study design of this research. The methods used in this study are described in this chapter and ethical considerations are presented.

Chapter 5: In this chapter, the scoping review findings are presented. A chronologically arranged annotated bibliography is used to capture the bibliographical details, content and context of each manuscript. These descriptions provide a global overview of each manuscript and are presented as a historical 'timestamp' for how the evolution of nursing theory and praxis.

Chapter 6: In this chapter, key exemplars from the corpus are used to illustrate the progression of nursing theory and praxis. These exemplars provide a commentary of the routine nursing duties prior to the reforms of the nineteenth century. These findings are organised and described under the themes of *restoring health*, *preventing complications* and *promoting comfort*.

Chapter 7: The findings of this study in the context of past and present nursing praxis are presented in this chapter. It critiques the common metanarratives on the origins of early nursing theory and practice and examines why such ideologies continue to influence current nursing praxis. The chapter concludes with a reinterpretation of Nightingale's contribution to nursing. This discussion provides the foundation for the recommendations presented in Chapter 8.

Chapter 8: As the final chapter in the thesis, this chapter reviews how the research aim was achieved and how the research questions were addressed. An evaluation of the research design and its implementation is also presented. Included in this evaluation is a review of the study's quality and rigour. Recommendations and implications for nursing education, leadership, practice and research are considered and the limitations of the study are presented.

Epilogue: The thesis concludes with the researcher's closing reflection on the research process.

1.9 Summary

This chapter has introduced the study, describing the impetus for the study, research aim, questions and study design. The researcher's position in the study was then explained. Chapter 2 presents an analysis of the second edition of the seventeenth-century Spanish treatise, *Instruccion de Enfermeros (Instructions for Nurses),* providing an exemplar of early nursing theory and praxis to help further situate the study.

Chapter 2: Background

2.1 Introduction

This chapter presents the initial analysis of the seventeenth-century Spanish treatise, *Instruccion de Enfermeros* (Instruction for Nurses). *Instruccion de Enfermeros* was used by a small order of male Catholic brothers, the Congregation of Bernardino de Obregon[8] (the Obregonians). The Obregonians administered the Madrid General Hospital from its inception in the late-sixteenth century until the early nineteenth century. The chapter begins with an overview of *Instruccion de Enfermeros*, followed by a summary of the themes identified in the initial analysis of the manuscript. It concludes with a synopsis of how this analysis was used to situate the broader study.

2.2 Rediscovering *Instruccion de Enfermeros*

In English-speaking countries, *Instruccion de Enfermeros* remains a largely unknown testament to the history of nursing. Despite the text's relative obscurity, there is evidence that nurses knew of *Instruccion de Enfermeros* at the turn of the twentieth century. For example, Nutting and Dock mentioned the fifth (1728) edition of the treatise in volume one of *A History of Nursing: The Evolution of Nursing Systems from the Earliest Times to the Foundation of the First English and American Training Schools for Nurses.* In a section on the 'dark period of nursing', Nutting and Dock (1907a) referenced *Instruccion de Enfermeros*:

[8]Novitiates admitted to the order were to take four vows—the traditional vows of obedience, chastity and poverty and an additional vow of hospitality (Oliger, 1907). Brothers who were assigned a caregiving role were known as *enfermeros* (nurses). Between the sixteenth century and early nineteenth century, the Obregonian order spread to other areas of Spain, Belgium and the Americas (Oliger, 1907). Despite the order's growth, the Obregonians never gained the same status as the St John of God Congregation. The Obregonian order dissolved after the French invaded Spain during the Peninsula War in the early nineteenth century (Oliger, 1907). Additional information on the Obregonian order is found in the publication at the end of this chapter.

> Quite a number of nursing manuals appeared in the dark period of nursing at the end of the eighteenth and in the beginning of the nineteenth century … In 1728 a Spanish manual was published in Madrid for nurses of the general hospital there[3] … *Instruccion de Enfermeros* … Madrid, 1728. (p. 533)

However, it was not until 1989 that knowledge on the document re-emerged through its rediscovery by chance. Postgraduate history student, Antonio Garcia Martinez, unearthed the treatise while working in the archives of the University of Seville in Spain. Realising the potential significance of the text, he showed it to his brother, Manuel Garcia Martinez, a registered nurse (A. Garcia Martinez & M. Garcia Martinez, personal communication, 6 June 2017). Since its rediscovery, an additional four editions of *Instruccion de Enfermeros* have been found (see Table 2.1).

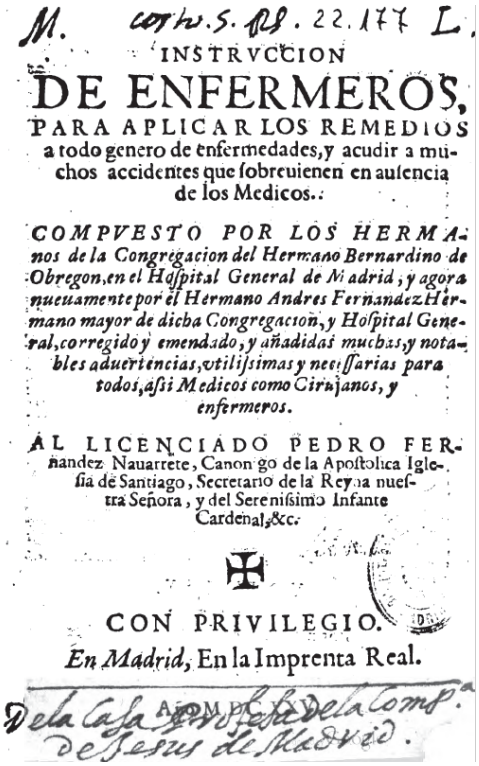
Table 2.1: Overview of the five editions of *Instruccion de Enfermeros* (1617–1728)

	First edition (1617)	Second edition (1625)	Third edition (1664)	Fourth edition (1680)	Fifth edition (1728)
Full title in English	Instruction for nurses and comfort to the sick: And real practice of how to apply the remedies ordered by physicians: Very necessary for the patients to be well healed by practitioners of medicine as visited by many doctors of this Court	Instruction for nurses to apply the remedies to all kinds of diseases and attend to many accidents that occur in the absence of doctor	Instruction for nurses to apply the remedies to all kinds of diseases and attend to many accidents that occur in the absence of doctor	Instruction for nurses to apply the remedies to all kinds of diseases and attend to many accidents that occur in the absence of doctor In this edition 'enfermeros' is misspelled as 'enfermos' (sick)	Instruction for nurses and how to apply the remedies to all kinds of diseases, and attend accidents, which occur in the absence of doctors; brought to light in this fourth impression by Brother Agustin del Buen-Suceso ... again added with some remedies for various diseases
Author	Congregation of Bernardino de Obregon	Congregation of Bernardino de Obregon Andres Fernandez	Congregation of Bernardino de Obregon Andres Fernandez	Congregation of Bernardino de Obregon Andres Fernandez	Congregation of Bernardino de Obregon Agustin del Buen-Suceso
Publisher	Imprenta Real, Madrid, Spain	Imprenta Real, Madrid, Spain	Unknown	Roque Rico de Miranda, Madrid Spain	Imprenta de Bernardo Peralta, Madrid Spain
Structure	Three separate treatises: Part 1: Prayers Part 2: Care of the dying	Two treatises: Part 1: Nursing interventions Part 2: Care of the dying	* Unable to obtain digitised copy (description of pages in online catalogue suggests it consists of two treatises)	One treatise: Nursing interventions Treatise on care of the dying has been removed	Same as 1625 format Treatise on care of the dying has been reinserted

	Part 3: Nursing interventions				
Length of treatise[9]	82 pages	232 pages	220 pages	220 pages	144 pages
Format	25 chapters (treatise on remedies) 2 clinical alerts Nil notations	31 chapters 6 clinical alerts 30 notations are listed in the margins	*	Same as 1625 format Notations remain	31 chapters 11 clinical alerts Nil notations Smaller font than previous editions
Approval for publication	Pedro de Contreras provides a 3-page endorsement of the book	Pedro De Contreras provides a 1-page endorsement of the second edition	*	A 10-page approval from the King is included. No indication of who was representing the Crown	Ordinary license issued by Cristoval Damasio. Crown's license issued by Miguel Fernandez Munilla
Reviewers	Father Antonio Colaço Dr Simon Rodriguez[10]	Father Antonio Colaço Dr Diego Vela Mr Soto[11]	*	Father Antonio Colaço[12] Dr Diego Vela Mr Soto Dr Juan de Poribanez	Diego Fernandez Dr Bernardo Lopez de Arujo Dr Isidoro Salvador
Dedication	Not present	Pedro Fernandez Navarrete	*	Duquela de Alva by Senior Brother Blas de la Cruz	San Bernardino of Sena by Senior Brother Agustin de Buen-Suceso

[9] For treatise that describe nursing interventions.
[10] Rodriguez is mentioned on page 137 as one of the doctors at Madrid General Hospital.
[11] Unknown occupation or role—Soto may have been a doctor.
[12] Reviews from Colaço, Vela and Soto were copied from the 1625 edition.

2.3 The Second Edition of *Instruccion De Enfermeros*



INSTRVCCION
DE ENFERMEROS,
PARA APLICAR LOS REMEDIOS
a todo genero de enfermedades, y acudir a muchos accidentes que ſobreuienen en auſencia de los Medicos.

COMPVESTO POR LOS HERMAnos de la Congregacion del Hermano Bernardino de Obregon, en el Hoſpital General de Madrid, y agora nueuamente por el Hermano Andres Fernandez Hermano mayor de dicha Congregacion, y Hoſpital General, corregido y emendado, y añadidas muchas, y notables aduerencias, vtiliſsimas y neceſſarias para todos, aſsi Medicos como Cirujanos, y enfermeros.

AL LICENCIADO PEDRO FERnandez Nauarrete, Canonigo de la Apoſtolica Igleſia de Santiago, Secretario de la Reyna nueſtra Señora, y del Sereniſsimo Infante Cardenal, &c.

CON PRIVILEGIO.
En Madrid, En la Imprenta Real.

Figure 2.1: Title page of *Instruccion de Enfermeros* (2nd ed.)

The second edition of *Instruccion de Enfermeros* was released in 1625 after considerable revisions by the book's author, Andres Fernandez (?–1625). In this edition, the principles and practices of Obregonian nursing were developed to produce a comprehensive instructional guide to improve the capacity of Fernandez's nurses. The content and layout of this revised edition became the blueprint for the subsequent editions of the text (see Table 2.1). Consequently, the second edition was the focus of this analysis.

2.3.1 The author—Andres Fernandez

Andres Fernandez was an influential Obregonian brother whose roles included Senior Brother of the congregation and senior nurse[13] at Madrid General Hospital (Garcia Martinez & Garcia Martinez, 1997). When writing the second edition of *Instruccion de Enfermeros*, Fernandez had

[13] Equivalent to a matron.

over two decades of nursing experience: ‘And so it seemed a very fair thing to show, and teach others what I learnt in my twenty-four years of experience … learnt from very learned and experienced doctors’ (1625, p. vii). Fernandez was also believed to have substantially contributed to the content and structure of the Obregonian *Constituciones* (Constitutions), which were published in 1634—nine years after Fernandez’s death. Why Fernandez rewrote *Instruccion de Enfermeros* is further explained in the publication outlined later in this chapter.

2.3.2 Key content in the second edition

Instruccion de Enfermeros details the foundational nursing principles and practices of Obregonian nursing; there were six domains of instruction: medicinal diet and remedy administration, assisting with activities of daily living, promoting wellbeing, environmental care, other clinical skills and specialised procedures, and administrative tasks (see Table 2.2).

Table 2.2: Overview of nursing care instructions discussed in *Instruccion de Enfermeros* (2nd ed.)

Instructional domain	Nursing interventions and considerations
Medicinal diet and remedy administration	Administering medicinal diets
	Preparing and administering medicaments (e.g., emetics, enemas, baths, inhalations, ophthalmic instillations, oral remedies, purgatives and topical treatments—balms and poultices)
Assisting with activities of daily living	Providing hygiene care: bathing, mouth care, hair washing, nail care
	Dressing and undressing the dependent patient
	Assisting with mobilisation and repositioning
	Assisting with elimination
Promoting wellbeing	Providing pastoral support
	Promoting sleep
Environmental care	Controlling temperature
	Improving air quality (e.g., adequate ventilation and burning of incense)
	Managing basic infection prevention and control (e.g., laundering soiled linen, cleaning utensils and sweeping floors)
Other clinical skills and specialised procedures	Managing apoplexy (stroke) patients
	Applying a pigeon or puppy to the head[14]
	Assisting with bloodletting
	Assisting with leech application
	Managing burns
	Caring for the unconscious patient
	Managing chest pain
	Cupping
	Managing fevers
	Hot boxing (*Estufa*)[15]
	Managing bleeding or haemorrhaging
	Managing diaphoresis
	Managing syncope
	Managing pain
	Performing physical assessment techniques (i.e., inspection and palpation)
Administrative tasks	Admitting patients
	Attending doctors' rounds
	Updating diet and medicinal prescriptions

[14] Used to treat a head cold.
[15] Used to induced sweating in an infectious patient.

The *Instruccion de Enfermeros* also provided nurses with instructions for patients diagnosed with specific medical conditions (see Box 2.1).

Box 2.1: Medical conditions found within *Instruccion de Enfermeros* (2nd ed.)

Angina	Haemorrhage
Apoplexy (stroke)	Hepatitis
Arthritis	Hydropsy (oedema)
Bronchitis	Kidney pain/infections
Bubonic plague	Measles
Burns	Melaena
Colds and flus	Other respiratory infections
Constipation	Other skin conditions
Consumption (tuberculosis)	Pyrexia
Croup	Scabies
Diarrhoea	Smallpox
Diphtheria	Spinal injury
Earache	Stomachache
Epistaxis	Syncope
Flank pain	Typhoid
French disease (syphilis)	Urinary retention
Gout	

Fernandez presented the instructions on each nursing task in a logical format; he structured his advice using a 'who', 'what', 'when', 'where', 'how', 'why' and 'what if' formula (see Figure 2.2). Consistently adhering to this structure may have assisted Fernandez's nurses in planning and implementing routine patient care, as Fernandez could also embed non-technical skills (e.g., critical thinking and decision-making) into the 'why' and 'what if' sections.

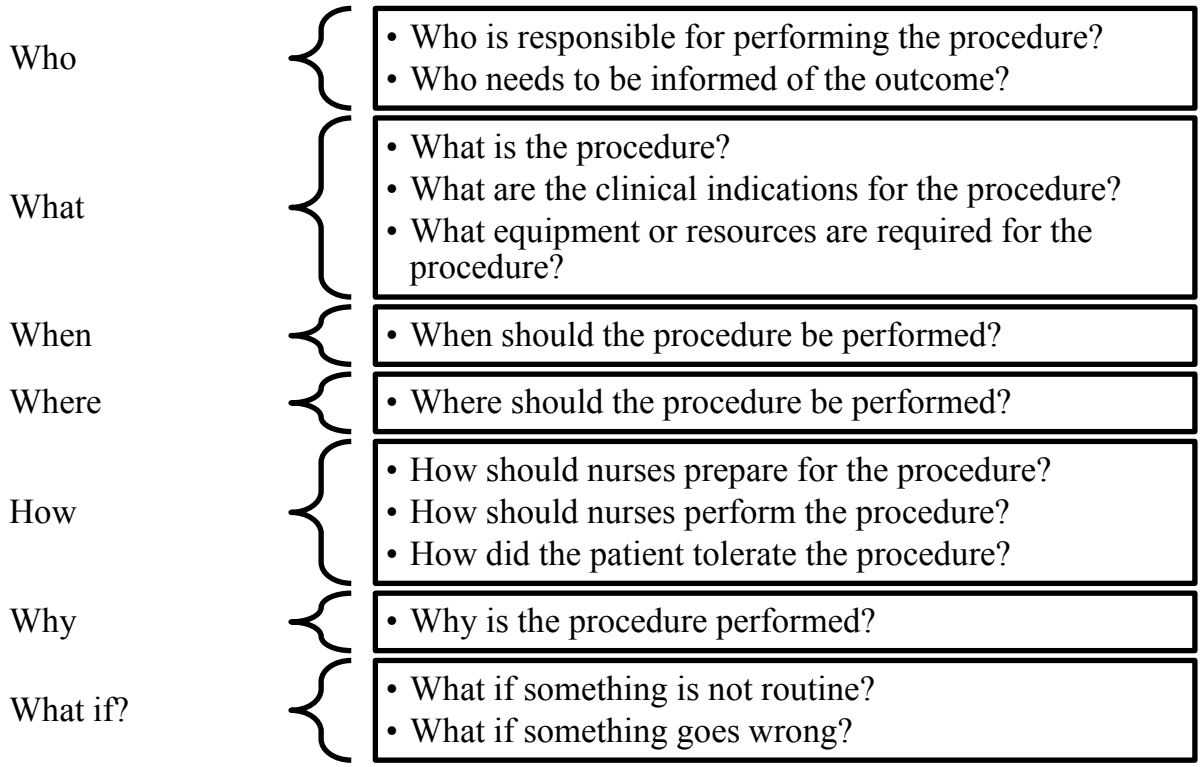


Figure 2.2: Format for each descriptor of care in *Instruccion de Enfermeros* (2nd ed.)

References to anatomy and humoral physiology (pathophysiology) were also identified within most of Fernandez's nursing interventions. He used these references to explain symptomology, provide an evidence-based rationale or instruct the reader on locating specific anatomical landmarks for the topical applications of medicaments (e.g., poultices and cataplasms). In many cases, Fernandez's instructions are comparable to contemporary landmarking techniques. For example, when his nurses needed to locate the apical pulse, the reader was informed: 'the heart, being one [of] the main body parts and a source of heat, is located in the vital cavity, two fingers below the left nipple, where it is best felt beating' (Fernandez, 1625, p. 62).

Consequently, the content found in *Instruccion de Enfermeros* suggests Fernandez wanted his nurses to not only possess sound psychomotor skills, but also understand the theory that informs those skills.

2.4 Themes Identified in the Second Edition

While *Instruccion de Enfermeros* was intentionally written to instruct the Obregonian nurses on the provision of nursing care, this analysis revealed several internal and external stressors that likely influenced Fernandez's decision to revise the treatise. These stressors are presented in the following publication: *'What a nurse suffers': Care left undone in seventeenth-century Madrid*.

2.5 Publication 1

'What a nurse suffers': Care left undone in seventeenth-century Madrid

Ms Tanya Langtree
Prof Melanie Birks
Dr Narelle Biedermann

Submitted to: *Nursing Philosophy*

Status: Published

James Cook University

Declaration by Candidate for Research Article

Chapter 2 publication	**Name** **Signature**	**Nature of contribution**
Langtree, T., Birks, M., & Biedermann, N. (2020). 'What a nurse suffers': Care left undone in seventeenth-century Madrid. *Nursing Philosophy, 21*, e12274. doi: 10.1111/nup.12274	Tanya Langtree	Development of concept and key ideas, write up, review and revisions Preparation for submission
	Melanie Birks	Supervision and development of concept and ideas Critical review Approval of final version
	Narelle Biedermann	Supervision and development of concept and ideas Critical review Approval of final version

2.6 Outcomes of this Analysis

This analysis revealed new evidence about pre-professionalised nursing theory and praxis:

1. Some nurses entering the vocation were literate.
2. Apprentice nurses underwent some education or training when entering the vocation.
3. Nursing interventions in the seventeenth century were complex.
4. Nurses were required to use critical thinking to prioritise, plan and implement care.
5. Nurses were expected to respond to patient deterioration and threats to patient safety.
6. Semi-formalised practice standards were in place in some hospitals.
7. Written resources were available to nurses for improving their knowledge base.
8. The instructional guides used by novice nurses are structurally similar to contemporary texts on nursing fundamentals.

Consequently, performing this initial analysis helped situate the larger study by disrupting some popular assumptions on the nature and scope of pre-professionalised nursing praxis. Therefore, this analysis further reinforces the impetus and significance of the research presented in this thesis.

2.7 Summary

An overview of the Obregonian nurses and their treatise, Instruccion de Enfermeros, has been presented in this chapter. Instruccion de Enfermeros provides a different and little-known story of nursing's heritage. The content of Instruccion de Enfermeros reveals the complexity and pressure of Obregonian nursing practice—these concepts will be further explicated in Chapter 6. This initial analysis has identified new evidence that contradicts several longstanding assumptions about the nature of pre-professionalised nursing theory and praxis. The next chapter presents an explanation of the methodology used in this study.

Chapter 3: Methodology

3.1 Introduction

Critical to the success of any research is the researcher's ability to articulate the study design and methodology. This articulation assures the reader that the researcher understands their chosen methodology, thereby enhancing their credibility. This chapter begins with an overview of my worldview and presents the research paradigms that underpin this study—interpretivism and postmodernism. An explanation of how these paradigms inform the study is then provided. The chapter concludes with an overview of the study's methodology—historical method. A discussion of the three main streams of historical method will be presented: Rankean, constructionist and postmodernist. Further, this chapter contains a justification for the selection of postmodernist historical methods as the most appropriate methodology for this study.

3.2 Research Paradigm and Philosophical Perspective

A research paradigm provides the overarching conceptual framework for the study design (Braun & Clarke, 2013). When determining which paradigm to use, the researcher must consider whether the proposed research will use a qualitative, quantitative or mixed-methods approach. Quantitative research employs experimentation to test hypotheses; therefore, it is concerned with internal and external validity (Denzin & Lincoln, 2005b). A positivist or post-positivist (scientific/empirical) paradigm is normally utilised in quantitative studies (Creswell, 2014). In contrast, qualitative research focuses on the subjectiveness of the human experience; therefore, an anti-positivist paradigm is typically used (Creswell, 2014; Denzin & Lincoln, 2005c). Mixed-methods research incorporates quantitative and qualitative methods; hence, a combination of positivist and anti-positivist paradigms may be applied (Creswell, 2014). This research project is a historical study in which the researcher will analyse sources to interpret

past influences on contemporary nursing knowledge and practice. Therefore, this project is qualitative in nature (Denzin & Lincoln, 2005c).

Qualitative research paradigms have their origins in the social sciences, such as sociology and psychology (Holloway & Galvin, 2017). Features of qualitative paradigms include an acknowledgement that human behaviour is complex and dynamic and that the researcher is concerned with interpreting or constructing an understanding of human phenomena (Denzin & Lincoln, 2005c). Nonetheless, each qualitative paradigm also has its own unique features. Denzin and Lincoln (2005b) recommend the researcher employs four criteria (axiology, epistemology, ontology and methodology) when selecting a paradigm.

Axiology examines the researcher's personal ethics and values (Humphrey, 2013). This examination takes place during the planning stages of the research project and can be accomplished by examining one's worldview and asking, 'How will I be as a moral person in the world?' (Denzin & Lincoln, 2005b, p. 183). Humphrey (2013) recommended that researchers critique their purpose for study by reflecting on what they hope to achieve through the study. Epistemology is the 'theory of knowledge' (Holloway & Galvin, 2017, p. 21). It includes the researcher's basic assumptions about how knowledge is obtained and interpreted (Creswell, 2014). This can be achieved by asking 'How do I know the world?' and 'What is the relationship between the inquirer and the known?' (Denzin & Lincoln, 2005b, p. 183). Ontology is the study of being or reality (Birks, 2014a). Ontology requires the researcher to examine how reality is viewed (Denzin & Lincoln, 2005b). The answers to these questions are rooted in the researcher's worldview. By understanding the paradigm's ontology and epistemology, the researcher will be guided to an appropriate methodology and methods for research (Denzin & Lincoln, 2005b; Holloway & Galvin, 2017).

Articulating my worldview in Chapter 1 helped clarify my answers to these questions, prompting me to realise that my natural inquisitiveness and moral sensitivity drive me to rarely take things at face value—there is no black and white. Instead, I need time to make sense of the situation through examining multiple perspectives and probing the 'truth'. This realisation assisted me in selecting interpretivism and postmodernism as the philosophical perspectives for this research study.

Interpretivism and postmodernism possess numerous epistemological similarities (see Table 3.1). First, both paradigms are anti-positivist in that they reject empirical approaches to studying human experiences. Hence, both are appropriate frameworks for qualitative research methodologies. These frameworks also recognise that the researcher and (when applicable) the participant each assign a unique interpretation to the phenomenon under study (Crotty, 1998). Consequently, multiple 'realities' exist because 'reality' is a subjective, individual experience that is influenced by a range of contextual factors (Crotty, 1998). Despite these similarities, these two perspectives have distinct differences. A separate discussion of each perspective is included in Sections 3.2.1–3.2.3.

Table 3.1: Comparison of the characteristics of interpretivism and postmodernism

Item	Interpretivism	Postmodernism
Origins	Philosophy was created in contradistinction to positivist beliefs Originated during the mid- to late nineteenth century	Movement that rejected the ideals and beliefs of modernity and modernism Mid-twentieth century to present
Ontology	Recognises there are multiple realities	Generally acknowledged that there is no one truth or version of reality Radical postmodernists are anti-realist
Epistemology	Understanding through processes of interpretation (researcher and participant) Recognises the importance of contextualisation	Hybridisation resulting in a pluralist epistemology—multiple ways of knowing
Axiology	Making sense of the social world from a variety of perspectives	Scepticism Embracing difference
Features	Recognises subjectivity Reality is a social construct Cannot generalise findings to the general population	Deconstruction Challenging ideologies and metanarratives Recognises rupture and discontinuity Recognises subjectivity Multiple meanings Knowledge is inherently unstable Examines challenging of social norms
Methods	Interviews Observation Interpretation of written text (hermeneutics) Focus groups	Dependent on methodology and design May incorporate non-traditional or eclectic methods

3.2.1 Interpretivism

Interpretivism has its roots in the social sciences—in particular sociology, history, psychology and anthropology (Holloway & Galvin, 2017). During the early to mid-nineteenth century, positivism (empiricism) was the dominant philosophy governing knowledge acquisition and research (Donnelly & Norton, 2011). The rise of positivism was partly underpinned by gains of scientific knowledge during the eighteenth-century Enlightenment (Dharamsi & Scott, 2009). However, its rise was also in response to the popular culture of the time—a preoccupation with 'scientific thinking'. In accordance with this trend, positivists believed that the world was nomothetic—it operated under natural, logical and predictable laws (Dharamsi & Scott, 2009). This view also extended to explaining human behaviour (Holloway & Galvin, 2017). Positivists professed that human inquiry, actions and behaviours could be measured and evaluated through the application of rigid empirical processes and frameworks (Crotty, 1998; Holloway & Galvin, 2017). Positivists rejected the notion that variables, such as context, the environment or human emotions, may influence an individual's thoughts and actions (Crotty, 1998).

In response to this reductionist view of the human experience, several late nineteenth-century philosophers proposed the need to adopt an interpretivist lens when studying humans (see Table 3.2; Birks, 2014a; Crotty, 1998; Holloway & Galvin, 2017). Max Weber's (1864–1920) *Verstehen* approach to sociology was one of the most influential philosophies of the period (Holloway & Galvin, 2017; Humphrey, 2013). Weber recognised that humans and society function in complex, unpredictable ways. Therefore, he postulated that they cannot be studied using empirical methods of investigation (Humphrey, 2013; O'Reilly, 2009). Instead, Weber asserted that meaning could be found by *understanding* the individual's goals and intentions of their behaviour using empathy and situating the research in its natural context (Holloway & Galvin, 2017; Humphrey, 2013).

Table 3.2: Overview of the main scholars of interpretivism

Philosopher	Contribution
Immanuel Kant (1724–1804)	Kant asserted in his thesis, *Critique of Pure Reason* (1781), that humans not only experience the world, they also interpret it. Human reasoning influences knowledge acquisition (Dharamsi & Scott, 2009).
Wilhelm Dilthey (1833–1911)	Expanded Kant's assertions in *Introduction to the Human Sciences* (1883), presenting the field of *Geisteswissenschaften* ('human sciences'). *He opposed the use of empirical methods in historical and social science research.* Dilthey proposed that the understanding of human behaviour/experiences must incorporate sociocultural and historical contexts. He also recognised that human science and historical research can only ever present a partial 'reality'. His work influenced historical method and hermeneutics , including the 'hermeneutic circle' (Crotty, 1998; Hamid, 2016; Makkreel, 2016).
Wilhelm Windelband (1848–1915)	Windelband was a neo-Kantian whose views recognised the limitations of empirical methods in philosophy, psychology and historiography. He rejected the use of causality and determinism in history and instead acknowledged the role of cognition, the individual's role in history and their construction of reality. Windelband identified that uniform definitions of philosophy were impossible because of cultural diversity, individuality and the heterogeneity of human experiences (Luft, 2015; Mehlich, 2016). Windelband introduced the terms 'nomothetic' (derived from the Greek word *nomos* meaning 'law') and 'idiographic' (derived from the Greek word *idios* meaning 'individual' or 'own') to differentiate between the approaches used in natural sciences and human/social sciences (Crotty, 1998).
Edmund Husserl (1859–1938)	Husserl founded phenomenology. He discounted the positivist approach as a mathematisation of the world. He argued that such abstraction does not correlate to the world we experience (Crotty, 1998; Hopkins, 2010).
Max Weber (1864–1920)	Generally viewed as the founder of interpretivism. Weber believed that humans and inanimate objects cannot be studied in the same way—he was anti-positivist. He advocated a *Verstehen* approach to studying humans and society—understanding something in its context to allow an interpretation/reconstruction of the experience/behaviour. When studying humans, he urged 'we should treat them as people' (Holloway & Galvin, 2017).

The ontology of interpretivism recognises that there are multiple realities (Rapley, 2018). Reality is viewed as a social construct that is dependent on context, worldview and the sharing of meanings (Humphrey, 2013; Rapley, 2018). The epistemology of interpretivism recognises that events or behaviours under empirical investigation are understood through the researcher's and (when applicable) participant's interpretations (Goldkuhl, 2012). Interpretivist approaches are varied and range from conservative methods such as classical hermeneutics to more radical deconstructionist approaches (Crotty, 1998). The latter are closely aligned with postmodernism and poststructuralism movements. Regardless of the approach taken, the interpretivist researcher examines the 'culturally derived and historically situated interpretations of the social-life world' (Crotty, 1998, p. 67). Thus, the researcher needs to acknowledge the subjective meanings (preconceptions, assumptions, biases and/or beliefs) that may already be present and explore these interpretations to (re)construct meaningful understanding about the phenomenon under study (Goldkuhl, 2012).

3.2.2 Postmodernism

Postmodernism is the second philosophical perspective that underpins this research project. Postmodernism is an arts and humanities movement that began in the 1950s (Brown, 2013). It encompasses numerous artistic outputs, including literature, music, art, architecture, historiography, fashion and philosophy (Crotty, 1998). Postmodernism evolved as a reaction to and challenge of the conservative views that dominated its predecessors of modernity and modernism (Braun & Clarke, 2013; Crotty, 1998).[16]

[16] Modernity occurred between the last half of the nineteenth century and World War I [WWI] (Breisach, 2007). During this period, the Western world underwent significant societal changes, including scientific and technological advancement, industrialisation, urbanisation, democratisation and secularisation (Donnelly & Norton, 2011). Accordingly, the discipline of history also evolved and was characterised by the introduction of empirical methods to rationally and precisely prove facts (Donnelly & Norton, 2011; Salevouris & Furay, 2015). Progress, causality (cause and effect—implies a logical progression) and totality (completeness or absoluteness of

Postmodernism contests the philosophical assumptions of causality, totality, progress and reality (Lyotard, 1984). In doing so, it ruptures the rhetoric of modernist systems of thought (Munslow, 1997). The axiology of postmodernism focuses on disrupting power imbalances and giving voice to the 'other' (Sarup, 1993). The ontology of postmodernism conveys relativist views and recognises that there can be no single objective truth or reality because both are socially constructed entities (Sarup, 1993). The epistemology of postmodernism emphasises the ambiguity and instability of knowledge (Breisach, 2007; Braun & Clarke, 2013). It also supports multiple ways of knowing, including the deconstruction of what is known and generally accepted as the truth (Crotty, 1998).

The dynamism of postmodernism means it is sometimes perceived as a hybridisation of interdisciplinary intellectual movements, including poststructuralism (Donnelly & Norton, 2011). Despite drawing from diverse and eclectic disciplines, the overarching foundation of this philosophical stance is that the realist ontologies and empiricist epistemologies that underpinned modernity and (to a lesser extent) modernism are obsolete (Donnelly & Norton, 2011; Lyotard, 1984). Collectively, postmodernism encourages the critique and deconstruction of societal beliefs and norms so that research outputs do not 'supply reality' but rather bear witness to the 'unpresentable' (Lyotard, 1984, pp. 81–82).

Postmodernism is the antithesis of modernistic values (e.g., causality, truth). This disruption makes it a controversial philosophical approach (Breisach, 2007; Brundage, 2013; Crotty, 1998; Donnelly & Norton, 2011; Howell & Prevenier, 2001). Much of this controversy arises from postmodernism's rejection of absoluteness and its imprecision (i.e., it does not fit into a defined

a phenomenon) were key concepts of modernity (Breisach, 2007). At the beginning of the twentieth century, philosophers began to question modernity's notions of progress and empiricism, giving rise to modernism. This shift in philosophical stance was associated with a growing awareness of the role of self-consciousness and experimentation (Crotty, 1998; Sarup, 1993). It was also driven by scholars witnessing the devastation caused by war (e.g., WWI and the Spanish Civil War) and beginning to question its toll (Breisach, 2007). Therefore, modernism was an ambiguous, transitional period in which the notions of modernity were neither fully accepted nor rejected (Crotty, 1998; Sarup, 1993).

structure or set of rules), which leads to concerns about its validity and incorporation into qualitative research. For example, concerns about postmodernism's usefulness in guiding research projects include its status as a 'kind of philosophical nihilism' (Brundage, 2013, p. 17) and 'most complex' (Hallett, 2008, p. 150). While proponents of postmodernism do not refute such claims, they relish this imprecision:

> If this work seems so threatening … this is because it isn't simply eccentric or strange, incomprehensible or exotic (which would allow them to dispose of it easily), but as I myself hope, and as they believe more than they admit, competent, rigorously argued, and carrying conviction. (Jacques Derrida, as cited in Derrida & Weber, 1995, p. 409)

In this research, I have chosen three French scholars to guide my postmodernist philosophical stance: Jean-François Lyotard (1924–1998), Michel Foucault (1926–1984) and Jacques Derrida (1930–2004).

Lyotard is one of the few postmodernist philosophers who used the term 'postmodern' (Fraser & Nicholson, 1990). The ideas presented in his book, *The Postmodern Condition*, are considered the *locus classicus* of postmodernism (Fraser & Nicholson, 1990). In it, he defined postmodernism as an 'incredulity towards metanarratives' (1984, p. xxiv). Metanarratives, also known as grand narratives, are ideological, generalised or unifying accounts about a societal group or circumstance that are unquestionably accepted as true (Brown, 2013).[17] These ideologies wield an authoritative influence on what is believed to be true and just in society and if left unchallenged can lead to fundamentalism, marginalisation and oppression (du Toit, 2011; Sim, 2011).[18] Therefore, postmodernists view metanarratives with scepticism because of their ability to suppress different or opposing ideologies (du Toit, 2011; Lyotard, 1984).

[17] For example, metanarratives about nursing include nursing is a caring profession; nurses are nurturers; and nursing is a woman's job.
[18] An example is the ethnic cleansing and genocide that occurred with Nazism during the 1930s and 1940s.

Foucault applied a postmodernist lens to examine societal norms and conformity. In works such as *Madness and Civilisation: A History of Insanity in the Age of Reason* (1961), *The Birth of the Clinic: An Archaeology of Medical Perception* (1963) and *Discipline and Punish: The Birth of the Prison* (1975), Foucault theorised that human behaviour can be controlled and modified by one party exercising power over another (Gutting, 2005). This subjection can be achieved through objectifying, repression, surveillance, normalising judgement and controlling the dissemination of knowledge (Gutting, 2005; Howell & Prevenier, 2001). In turn, the power exerted by those in authority creates an accepted version of reality by producing a docile and compliant population (Brundage, 2013).

Derrida is renowned for his works on deconstruction and linguistics. In his early works, such as *Of Grammatology* (1967), he endorsed the need to deconstruct the meaning of words, commencing with their logocentrism—'the linguistics of the word' (Jay, 1987, p. 154). Pivotal to Derrida's premise is the notion that word usage to signify meaning to the signified (i.e., others) is not arbitrarily selected by the signifier (i.e., speaker/author; Crotty, 1998; Howell & Prevenier, 2001). Instead, the signifier assigns meaning and intention to the word; thus, it is never objective, even if that was the signifier's intention (Crotty, 1998). Derrida also postulated that the meaning of a word is inherently unstable—it changes between individuals, contexts and over time (Howell & Prevenier, 2001).[19]

3.2.3 Rationale for philosophical perspective

Interpretivism and postmodernism were used to support the depth of inquiry required in this study. Interpretivism facilitated the conceptualisation of pre-professionalised nursing practice by exploring the meaning assigned to the content within the corpus, while also situating sources

[19] For example: the use of 'gay' until the last few decades was synonymous to happiness or joy, whereas, today it is used to describe sexual orientation.

in their individual temporo-spatial context. Adopting a postmodernist lens enabled disruption of the underlying ideologies and assumptions surrounding pre-professionalised nursing knowledge and praxis. Collectively, these two approaches enabled exposure of longstanding half-truths and untruths about early nursing practice through privileging contradictory and often hidden evidence.

3.3 Methodology

The methodology of a study is the guiding principles that inform the study design (Mills, 2014). For this project, the methodology is postmodernist historical method. This methodology was selected because it critically addresses the research aim and questions, while providing a flexible structure for the collection and analysis of historical sources to be used in this study.

Historical method has its origins in the nineteenth century (Donnelly & Norton, 2011). German historian Leopold von Ranke (1795–1886) is commonly cited as the founder of modern historical method because of his quest to transform historical research approaches from a haphazard, non-scientific endeavour to a structured, empirical approach (L'Estrange, 2014). In doing so, Ranke attempted to validate history as a legitimate, scientific discipline (L'Estrange, 2014). Ranke's principles, now known as traditional, Rankean and/or empirical historical method, are the foundation for other forms of historical methods, including the postmodernist historical method used in this study.

3.3.1 Rankean (empirical) historical method

The Rankean method is the most conservative form of historical method. It consists of four foundational stages: understanding categories of evidence (source classification); collecting evidence (data collection); using the evidence (analysis) and communicating the evidence (dissemination; Shafer, 1974). These stages are summarised in this section and further explicated in the publication at the end of this chapter.

The first element, understanding categories of evidence, requires the historical researcher to discern the differences between primary and secondary sources. A primary source is 'any record contemporary to an event or time period' (Galgano, Arndt, & Hyser, 2013, p. 59). While originally restricted to official written documents, primary sources today have expanded to include a range of diverse subcategories. Mages and Fairman (2008a) defined these categories as: 'personal documents,[20] government documents, organisational[21] documents, media communications, artefacts[22] and realia,[23] audio/visual materials[24] and dissertations' (p. 130). A secondary source is 'a summary or interpretation of an event based on primary sources contemporary to the event' (Galgano et al., 2013, p. 40). For example, it could be a book written by another historian or it may be another form of interpretation that aids in understanding the situation, such as a newspaper article or cartoon (Presnell, 2013). Secondary sources are used to refine the research questions and study design (e.g., search strategy) and contextualise the researcher's interpretation of the event, period or phenomenon under investigation (Galgano et al., 2013; Mages & Fairman, 2008).

Collecting the evidence commences with the search for sources. This stage is guided by the aims of the study, research questions and conceptual and contextual parameters. In other fields of qualitative research, these parameters are known as inclusion and exclusion criteria. The search strategy in historical research is an iterative process during which the researcher may engage in a snowballing process of discovery (e.g., hand-searching one source may allude to the presence of other potentially relevant sources). Empiricists traditionally view archival research as the principal mechanism to search and collect primary sources (Shafer, 1974). In

[20] These sources include diaries, records and correspondence.
[21] Such as records kept in hospitals, businesses and churches.
[22] Used to designate any object created by a human (Mages & Fairman, 2008).
[23] Used to describe objects such as uniforms, medals and discipline-specific equipment.
[24] Audiovisual materials include oral histories and recorded speeches. Visual materials include original works of art, maps and blueprints.

the past, archival materials were often official documents, such as court and taxation records, that provided proof of an event. For contemporary researchers, this restriction is no longer strictly imposed. Some argue, however, (such as the late Arthur Marwick) that 'documents of record', such as those listed previously, trump other forms of primary sources (i.e., letters, artwork and newspaper clippings; Marwick, 2001, pp. 26–27). Recording each source's bibliographical details is also part of collecting the evidence.

The next stage of Rankean historical method is using the evidence. During this stage, sources undergo source criticism, a process in which each source is scrutinised for its authenticity (external criticism) and accuracy, value and credibility (internal criticism; Salevouris & Furay, 2015; Wood, 2011). Using the evidence also requires the researcher to synthesise the evidence (Shafer, 1974). During this synthesis, the historical researcher organises pertinent information drawn from the corpus into a cogent account of the event, epoch or phenomenon (Munslow, 1997; Shafer, 1974). Empirical researchers view this stage of the research process as 'riddled with subjectivism' (Shafer, 1974, p. 26).

Communicating the evidence involves the dissemination of the interpretation using a written narrative (Shafer, 1974). Stylistic norms for presentation of the narrative are diverse and dependent on factors such as the researcher and style of historical method adopted. For example, the Rankean historical method requires the researcher to objectively reconstruct the historical event under Ranke's guiding principle of *wie es eignetlich gewesen* ('show what actually happened'; King, 2016). Maintaining this degree of objectivity requires the adoption of a realist epistemology in which discrete divisions between 'fact and value' and 'the knower and that which is known' are created (Munslow, 1997, p. 38). Segregating information this way helps limit the risk of the truth being documented in a non-perspectival manner; the resultant narrative

becomes a 'historical discourse of the proof' (Munslow, 1997, p. 37). Table 3.3 summarises the main features of the Rankean historical method.

Table 3.3: Features of Rankean historical method

Element	Characteristics
Epistemology	Realist
	History is not used to predict the future or for moral teaching; it is used to 'search for the truth'
	Reconstructionist view
Selection of topic	Originally focused on diplomatic and political history to build national identity rather than researching individuals
Data collection and inclusion criteria	'Documents of record'/official documents should be used
	All available evidence should be examined
Critical source analysis	Evaluating internal and external criticism
	Sources form the basis of historical knowledge
	Wie es eignetlich gewesen—'Show what actually happened'
	'What' questions are used to guide the analysis
Dissemination of findings	Only 'facts' can be presented—objectiveness is an absolute priority
	Narrative is devoid of perspectives, opinions and judgement
	Neutrality maintained

Despite the widespread adoption of the Rankean historical method in the late nineteenth century, two main criticisms about this style of historical method transpired. First, the restrictiveness of the source selection was criticised as creating a one-dimensional representation of the historical event under study. While the intention of this imposed restrictiveness was to increase the reliability of the information presented, it created a narrow, politicised agenda that ignored the social context of the event under investigation (Donnelly & Norton, 2011). Today, many of these early Rankean studies are viewed as nation-building propaganda (Donnelly & Norton, 2011; King, 2016). Second, by limiting the sources used in historical studies to official artefacts, a history of individual experiences about an event or

epoch is created (Donnelly & Norton, 2011). Hence, this ignorance of the broader context paradoxically limited Ranke's quest for factual representation. These limitations led to the generation of other styles of historical methods, including constructionist and postmodernist historical methods.

3.3.2 Constructionist historical method

Constructionist historical method is the second main form of historical method. This method evolved at the beginning of the twentieth century as an early response to the criticisms of empiricism. One main adaptations that occurred in this method was the move towards studying the plight of individuals, particularly those who were 'ordinary'. This approach is known as 'history from below' or 'people's history' (Donnelly & Norton, 2011). Three main groups of historians influenced this shift in historical method: those who were pro-Marxist;[25] those who studied the effects of post-colonialism; and the *Annales* school[26] (Donnelly & Norton, 2011; Galgano et al., 2013).

Constructionist historians argue that we cannot separate fact from interpretation when analysing historical knowledge (Donnelly & Norton, 2011; Munslow, 1997). Instead, constructionist historians such as E. H. Carr claim that facts only exist because the historian's judgement has deemed them suitable for inclusion in the study (Munslow, 1997). This epistemological shift requires the historian to shift from empiricism's *chronicalisation* and *documentation* of facts towards a more relativist *explanatory interpretation* of events (Donnelly & Norton, 2011; Munslow, 1997). The constructionist historian strives to identify 'how could this thing have come to be at all?' (Nowell-Smith, 1977, p. 1). To answer this question, the constructionist

[25] Karl Marx's (1848) *The Communist Manifesto* claimed historical inquiry must refer to the economic organisation and class structure of society (Brundage, 2013).
[26] The *Annales* school was a group of French historians that developed a social history methodology via the journal, *Annales d' Histoire Économique et Sociale* in the 1920s. The *annalistes* viewed event-oriented history as a misrepresentation of the complexity of society. Their historical inquiry instead focused on society's everyday life, its *mentalités* (Brundage, 2013).

historian makes inferences and privileges their constructed theory about the event as the primary focus of the narrative (Munslow, 1997; Nowell-Smith, 1977).

Constructionism also facilitated changes to source analysis. The definition of primary sources was expanded to include non-official sources such as personal diaries and letters. Secondary sources were also incorporated into historical method to assist with the generation of a theory (Donnelly & Norton, 2011). This introduction resulted from identifying that most ordinary people do not have a large amount of 'official' evidence recorded about them or by them.[27] Hence, it was a way to supplement the information derived from the primary source (Donnelly & Norton, 2011).

Another distinct difference between Rankean and the constructionist historical method is source analysis. Unlike the empirical method, which only uses evidence, the constructionist historical method incorporates testimony into analysis (Nowell-Smith, 1977). Testimony is corroborating material used to support the researcher's evidence. Examples of testimony include eyewitness accounts or a known family or cultural tradition (Nowell-Smith, 1977). Such testimony assists the researcher to inductively construct a plausible explanation or theory (Munslow, 1997).

A different writing style is used in constructionist historical method. The constructionist narrative is characterised by a series of explanatory frameworks that are cohesively linked to a larger presupposition or metanarrative (Donnelly & Norton, 2011; Munslow, 1997). Identifying patterns and sequencing them into a meaningful structure is referred to as emplotment (Munslow, 1997). While all historical narratives use emplotment, the constructionist historical researcher uses propositional terms to inform (and possibly persuade) the audience of the links

[27] This is because of factors such as educational attainment and socio-economic status. This predicament is quite different to today's society, in which the impact of social media will leave a vast legacy of many 'commoners'.

between the evidence, the researcher's inferences and the sociocultural discourse under study (Munslow, 1997). Table 3.4 provides an overview of constructionist historical method.

Table 3.4: Features of constructionist historical method

Element	Characteristics
Epistemology	Marxist influences Social construction of 'reality' Constructionist view
Selection of topic	'History from below' and 'People's history' Focused on everyday life rather than significant events
Data collection and inclusion criteria	Testimony is incorporated to support evidence Primary sources do not need to be official records Secondary sources should be used
Critical source analysis	Focused on understanding human behaviour and societal change Problem-centred analysis—'how' and 'why' questions guide the researcher
Dissemination of findings	Theory generation become the focus of the narrative Presuppositions used to guide the reader

Critics of constructionism claim that this method preferences subjectivity over objectivity because of its lack of reliance on hard facts (Munslow, 1997). In contrast, supporters of this approach claim it presents a more comprehensive and representative depiction of the history because of its use of social contextualisation. This social contextualisation results in a more analytical, less descriptive narrative, in which a theory is tested and verified (Donnelly & Norton, 2011; Munslow, 1997). Nonetheless, the researcher's focus on explaining and justifying the generated theory in the narrative can be detrimental to privileging the 'other' because more abstract or divergent interpretations may be overlooked or ignored.

3.3.3 Postmodernist historical method

Postmodernist historical method is the most contemporary form of historical method (Donnelly & Norton, 2011). While the method utilises many of the conventions of the Rankean method (e.g., source classification and criticism, recording of bibliographical details, footnotes and endnotes), the way sources are analysed and interpreted is profoundly different (Brown, 2013). The most critical difference between the two methods is the postmodernists' rebuking of historical fact. Postmodernists believe that facts about the past are always a human construction; therefore, it is impossible to *wie es eignetlich gewesen* (Brown, 2013). This acknowledgement transforms historical analysis and interpretation because it dismantles the epistemology of how historical knowledge is created. In this dismantling, the interpretation shifts from a description of the studied event/phenomenon and becomes a deconstruction of what is known or generally accepted about the past (Munslow, 1997). Engaging in this deconstruction allows the researcher to investigate the influence (if any) of underlying ideologies, assumptions, biases and overt metanarratives on current understandings about the research topic.

Performing this deconstruction is reliant on the researcher critiquing and challenging the legitimacy of other Rankean tenets, such as objectivity, neutrality, causality, totality and temporality[28] (Jenkins, 2000). These tenets, used to validate historiography during the nineteenth century as a science, are viewed by postmodernists as signs of empirical naivety (McCullagh, 2004). For example, historians who adopt a postmodernist lens argue that historical research is never objectively derived because there will always be some degree of subjectivity in the decisions made about search preferences (e.g., archive selection) and source selection (Galgano et al., 2013; Munslow, 2012). Further, the postmodernist historical researcher acknowledges that the narrative is never objectively delivered—the information

[28] Temporality refers to how time is viewed (Hoy, 2009). Typically, empiricists viewed time as a linear progression (past, present and future; Donnelly & Norton, 2011; Kidambi, 2016).

included and the language and writing style used are ultimately determined by the researcher and used as a mechanism of control (Munslow, 2012). Consequently, there is a concession that maintaining objectivity and neutrality are impossible because the researcher plays a critical role in selecting the historical evidence to be used in the research and how it is to be shared with others (Brown, 2013; Munslow, 2014).

This disruption of objectivity and neutrality is influenced by the critiques of language use and truth that characterised the twentieth-century linguistic turn. The linguistic turn witnessed philosophers such as Ferdinand de Saussure first identify that language use is never passive (Breisach, 2007; Donnelly & Norton, 2011).[29] Instead, such philosophers recognised that spoken or written words (the *signifier*) are associated with pre-existing or learnt cognitive conceptualisations (the *signified*). It is these conceptualisations, not the words themselves, that produce meaning (Brown, 2013; Donnelly & Norton, 2011). The linguistic turn resulted in an epistemological shift in understanding how historical knowledge is generated. Further, it highlighted other deficits in the Rankean method, such as demonstrating that the sources themselves are constructions of the past (Brown, 2013; Donnelly & Norton, 2011).

The postmodernist historical method also disrupts and reject the Rankean tenet that there is a single, fixed truth (Barber & Peniston-Bird, 2009; Breisach, 2007; Donnelly & Norton, 2011). This 'severing' of a core Rankean tenet makes postmodernism appear radical to some traditional historians (Zagorin, 1990, p. 264). However, rejecting this tenet allows the postmodernist to transfer their focus away from the pursuit of a single truth. Therefore, this rejection disrupts popular narratives about the past by facilitating a more inclusive and critical interpretation of history (Howell & Prevenier, 2001; McCullagh, 2004). This disruption can subsequently lead to a 'more sophisticated theory of historical knowledge and historical truth'

[29] More contemporary scholars, such as Hayden White and Frank Ankersmit were thought to further influence this shift in the 1960s and 1970s (Donnelly & Norton, 2011).

(McCullagh, 2004, p. 5). Table 3.5 provides a synopsis of the main characteristics of the postmodernist historical method.

Table 3.5: Features of postmodernist historical method

Element	Characteristics
Epistemology	Deconstruction Radical forms are 'anti-realist' Challenges 'truth' and 'reality'
Selection of topic	Eclectic Cultural and political history Questioning power and control to privilege the 'other'
Data collection and inclusion criteria	Flexible approaches Incorporates technology Examines possible areas of control during search and data collection phases
Critical source analysis	Acknowledges the 'linguistic turn' Challenges prevailing ideologies and metanarratives Notes that language is inherently unstable Contextualisation and decentralisation are core tenets
Dissemination of findings	Narrative includes an explanation of possible plural histories Discusses possible covert or influencing factors Recognise areas of subjectivity Researcher is conscious of writing style and any of their own pre-existing metanarratives/judgements about the topic of the study

3.3.4 Rationale for selecting the postmodernist historical method

The postmodernist historical method was chosen as the methodology for this study. This form of historical method was selected for several reasons:

- This form of historical method supports the use of a heterogeneous range of non-traditional research methods and processes.

- The postmodernist historical method allowed avoided an analysis that was solely focused on describing pre-professionalised nursing practice and enabled understanding of the context of how and why routine practices and behaviours evolved or regressed.
- Adopting a postmodernist lens allowed me to move beyond the nineteenth-century rhetoric dominated by stories of Nightingale and Gamp to explore lesser-known aspects of early nursing practice.
- This method allowed critical analysis of contemporary ideologies, assumptions, stereotypes and narratives that dominate past and present nursing.

3.3.5 Addressing rigour in historical methods

During my review of historical methods, I found that while the terms rigour and rigorous were used to describe the process and output of historical research, little information existed for how rigour was demonstrated in this methodology. I was also confounded by why methods used in historical research were not routinely described in the narrative. My reflections on these perplexing issues led to the publication, 'Separating "fact" from fiction: Strategies to improve rigour in historical research'. This paper describes techniques that can be adopted to promote rigour in historical scholarship.

3.4 Publication 2

Separating 'fact' from fiction: Strategies to improve rigour in historical research

Ms Tanya Langtree
Professor Melanie Birks
Dr Narelle Biedermann

Submitted to: *Forum: Qualitative Social Research*

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	Melanie Birks	Supervision of and concept development and ideas Critical review Approval of final version
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Separating "Fact" from Fiction: Strategies to Improve Rigour in Historical Research

Tanya Langtree, Melanie Birks & Narelle Biedermann

Key words: historical method; historical research; qualitative research; rigour; trustworthiness

Abstract: Since the 1980s, many fields of qualitative research have adopted LINCOLN and GUBA's (1985) four criteria for determining rigour (credibility, confirmability, dependability and transferability) to evaluate the quality of research outputs. Historical research is one field of qualitative inquiry where this is not the case. While most historical researchers recognise the need to be rigorous in their methods in order to improve the trustworthiness of their results, ambiguity exists about how rigour is demonstrated in historical research. As a result, strategies to establish rigour remain focused on piecemeal activities (e.g., source criticism) rather than adopting a whole-of-study approach. Using a piecemeal approach makes it difficult for others to understand the researcher's rationale for the methods used and decisions made during the research process. Fragmenting approaches to rigour may contribute to questioning of the legitimacy of historical methods. In this article, we provide a critique of the challenges to achieving rigour that currently exist in historical research. We then offer practical strategies that can be incorporated into historical methods to address these challenges with the aim of producing a more transparent historical narrative.

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1. Introduction

Rigour reflects a researcher's ability to demonstrate competence, integrity and ethics while conducting and reporting on the study (TOBIN & BEGLEY, 2004). In qualitative research, rigour is synonymous with quality and is demonstrated by evidencing the trustworthiness of the research findings to others (LINCOLN & GUBA, 1985). How rigour is achieved, however, remains an elusive concept for many qualitative researchers. In part, this elusiveness is complicated by the very nature of qualitative research—it consists of a heterogeneous array of methodologies and methods, making it impossible for a uniform approach to be used in demonstrating and assessing rigour (MORSE, 2015; SANDELOWSKi, 1986). Further contributing to this confusion are the multifarious meanings that are assigned to the terms rigour, trustworthiness and quality (SPRINGETT,

ATKEY, KONGATS, ZULLA & WILKINS, 2016). Such variations can distort how some researchers perceive the construct of rigour. For example, a construct that equates rigour to legitimate research can drive researchers to engage in futile attempts of "proving" their findings using scientific methods even though the data themselves are inherently nonscientific (MAYRING, 2007; MAYS & POPE, 2000; TOBIN & BEGLEY, 2004; ZHAO, LI, ROSS & DENNIS, 2016). [1]

Returning to the seminal work of LINCOLN and GUBA (1985) can assist researchers to reframe their understanding of rigour. In the 1980s, LINCOLN and GUBA introduced four criteria for establishing rigour in qualitative inquiry: credibility, confirmability, dependability and transferability. Credibility, comparable to internal validity in quantitative studies, is the confidence that the research findings are a truthful representation (SANDELOWSKI, 1986; TOBIN & BEGLEY, 2004). Credibility is determined by assessing the plausibility of the researcher's interpretation and analysis compared to the original dataset (BAILLIE, 2015; KORSTJENS & MOSER, 2018; PRION & ADAMSON, 2014). Transferability is comparable to external validity or generalisability in quantitative research (MORSE, 2015; TOBIN & BEGLEY, 2004). It determines whether the findings are potentially applicable to another individual, group, time, context or setting (BAILLIE, 2015). In order to evaluate the potential of transferability, concepts and theories emerging from the original study first need to be decontextualised and abstracted (LINCOLN & GUBA, 1985; MORSE, 2015). Providing a "thick description", a term popularised by GEERTZ in 1973, of the findings is therefore essential for promoting transferability (MORSE, 2015; POLIT & BECK, 2010). Dependability, comparable to the concept of reliability in quantitative studies, refers to the stability or consistency of the research processes used during the study (TOBIN & BEGLEY, 2004). Dependability is evaluated by considering the decisions made and steps taken during the research process (PRION & ADAMSON, 2014). Confirmability, comparable to objectivity or neutrality in quantitative studies, verifies that the findings stand impervious to the researcher's characteristics, biases or assumptions (BAILLIE, 2015; SHENTON, 2004; TOBIN & BEGLEY, 2004). Despite being introduced over thirty years ago, these criteria are still widely accepted as being appropriate tools for planning and evaluating the research process in most types of qualitative research (MORSE, 2015). [2]

Qualitative historical research is one area where this is not the case. While authors commonly cite the need to be rigorous when conducting historical research, few authors have explained how rigour can be applied to this methodology (GILL, GILL & ROULET, 2018). It is unclear why this predicament exists; however, there is some concern that the application of a contemporary process (such as LINCOLN and GUBA's criteria) will create an ahistorical piece of historical research (TILLY, 2001). Other authors have also indicated that LINCOLN and GUBA's criteria lack the appropriate temporospatial (time and space) considerations needed for historical research (GILL et al., 2018). Nonetheless, these concerns are unproven and contradict one of the guiding principles that is common in all forms of qualitative research: the need for researchers to demonstrate "temporal sensitivity" while analysing human experiences (SANDELOWSKI, 1986; VAN MAANEN, 1983). [3]

What is evident in the literature is the historical researcher's tendency to adopt a piecemeal approach for establishing rigour. For example, while historical researchers place emphasis on source criticism as a way to establish credibility, little attention is given to how their analysis of the source can influence others' interpretations (FULLERTON, 2011). This haphazardness may be due to how novice researchers learn the skills used in historical method. Novice researchers tend to learn these skills by immersion; therefore, they may lack the theoretical principles that underpin such skills (GUNN & FAIRE, 2016 [2012]). Consequently, the novice researcher may not fully appreciate how weak methodological practices, including an inattention to rigour, can potentially skew the results of a study (ibid.). The novice researcher's ability to develop such skills is likely further hindered by the small number of practical guides on historical method that are available as well as their limited discussion on how to achieve or evaluate rigour (FULLERTON, 2011; LANGE, 2013). As a result, ambiguity persists regarding how to conduct rigorous historical research (L'ESTRANGE, 2014). [4]

The uncertainty that surrounds historical methods is a significant methodological weakness. It contributes to other researchers perceiving historical research as being an obscure, un-learnable process (ibid.); or more radically, to query its legitimacy as an authentic field of qualitative research (CHRISTY, 1975; HUME, 2017). In order to address this limitation, it is timely to explore how rigour can improve the transparency and quality of this field of qualitative inquiry. The aim of this article is to provide a critique of the challenges to achieving rigour that currently exist in historical research. In order to contextualise these challenges, the foundations of historical method will first be described (Sections 2.1-2.4). Strategies that can be incorporated into historical methods to address these challenges will then be outlined. Such strategies can aid in the development of a more transparent narrative, thereby allowing others to more accurately evaluate the quality of the products of historical research. [5]

2. Improving Rigour

Historical method is an umbrella term for a group of qualitative methods that explore the what, when, why and how of a past event, epoch or phenomenon (BOLDT, 2014; SARNECKY, 1990). Types of historical method include Rankean (also referred to as empirical/traditional); constructionist; and postmodernist (also referred to as poststructuralist or deconstructionist; DONNELLY & NORTON, 2011; MUNSLOW, 2006 [1997]). While the epistemology and ontology of each type of historical method differs, they are all dependent on source analysis in order to assemble an interpretative account of the past (MUNSLOW, 2006 [1997]). The historical research process is typically broken into four different stages: understanding types of sources; searching and collating sources; source criticism and analysis; and, dissemination (SHAFER, 1974 [1969]). During each stage of the research process, the researcher needs to implement strategies that strengthen and demonstrate the overall rigour of the study. [6]

2.1 Understanding types of sources

The first phase, *understanding types of sources,* involves the historical researcher developing an awareness of the types of evidence that are available for use. The historical researcher needs to be able to discern the differences between primary and secondary sources. A primary (original) source is a manuscript that was written during the period being investigated (SALEVOURIS & FURAY, 2015 [1988]). Primary sources serve as evidence that the event or phenomenon being investigated actually occurred (MARWICK, 2001). These sources include officially produced "documents of record" (e.g., census records; births, marriage and deaths registrations), personal files (e.g., letters, diaries), organisational documents, audio-visual materials (e.g., film or media coverage), oral histories, art, and other artefacts (e.g., archaeological relics) (MAGES & FAIRMAN, 2008; MARWICK, 2001). [7]

In contrast, a secondary source is normally a manuscript that is written post-event (SALEVOURIS & FURAY, 2015 [1988]). Secondary sources can be used by the researcher to help locate other primary sources that may be relevant to the study; to assist with understanding the context of the event/period being studied; and, to help determine the authenticity and accuracy of the primary source (MAGES & FAIRMAN, 2008; SALEVOURIS & FURAY, 2015 [1988]). [8]

Source classification assists the historical researcher with determining what types of sources will be most useful for the study. Overlooking source classification may result in the researcher failing to locate an exhaustive list of appropriate source materials, or becoming overly dependent on secondary sources (SHAFER, 1974 [1969]). Accordingly, the credibility of the findings are potentially weakened as the analysis and subsequent interpretation are founded on either an incomplete or a far-removed dataset (LUSK, 1997). [9]

In order to address these concerns, researchers need to spend time in the early stages of planning their study to consider what types of sources they intend to use (DONNELLY & NORTON, 2011). By reflecting on the range of potential sources available, the researcher is able to identify the need for any specialised assistance or equipment to assist with source evaluation, such as translation requirements (ibid., see also SHAFER, 1974 [1969]). Undertaking this reflection also enables the researcher to contemplate which type(s) of sources will best answer the research question (PRESNELL, 2013 [2007]). Performing this reflection assists the researcher to identify the strengths and limitations of different source types, including addressing the question of reliability. [10]

The reliability of sources that rely on memory rather than direct observation is a constant area of concern (HEINTZE, 1976; MARWICK, 2001; MEGILL, 2007). Types of sources affected by the "fallibility of memory" include oral histories, autobiographies and memoirs (DONNELLY & NORTON, 2011; PRESNELL, 2013 [2007]). The lapse in time between event and source production coupled with the participant's recall ability can result in a skewed account of the event where pertinent information is inadvertently left out of the testimony (BOSCHMA,

SCAIA, BONIFACIO & ROBERTS, 2008; SALEVOURIS & FURAY, 2015 [1988]). This phenomenon has been described as an "erosion of reliability" (BRUNDAGE, 2013 [1989], p.22).These types of sources are further prone to the influence of participants' personal biases and motives (LEWENSON, 2008; MARWICK, 2001). There are numerous reasons why this encroachment may occur, ranging from unintentional motives (e.g., where participants omit relevant information because they perceive it to be unuseful; SAFIER, 1976); to more subconscious variables (e.g., the participant represses painful memories as a form of self-protection; BIEDERMANN, 2001). Alternatively, the inclusion or exclusion of information may be due to self-serving reasons (ibid.; see also BRUNDAGE, 2013 [1989]). For instance, participants may fail to disclose salacious information for self-preservation or embellish their role in the event. [11]

By critiquing the types of sources that will be most likely used in the study, the researcher can begin to implement preemptive strategies in order to address such limitations. For example, the researcher who chooses to use oral histories as the main source of evidence may decide to: corroborate the participant's recollections with secondary sources; collect a number of oral histories from several different participants about the same event; or, incorporate other types of primary sources (e.g., written accounts) into the analysis (LEWENSON, 2008). Such techniques assist with evaluating the level of subjectivity embedded in the account through applying the principles of triangulation. In turn, this strengthens the credibility of the interpretation (GILL et al., 2018). [12]

2.2 Searching and collating sources (data collection)

The search and collation of sources is guided by the area of study, research aims and questions, as well as predetermined parameters such as the period or setting that is being studied. Other than determining the topic and period that is being studied, historical researchers do not tend to clearly define their search strategy prior to commencing the study. The searching and collating stage has traditionally been undertaken in an archive (SHAFER, 1974 [1969]). While many researchers continue to prefer working in a physical archive, the internet has enabled alternative methods for collecting evidence such as the use of digital libraries, databases and online repositories (VILAR & ŠAUPERL, 2015). [13]

During data collection, the historical researcher records the bibliographical details of each source. These records typically include the technical aspects of the source including title, authorship, publisher, year, publication location, purpose, and archive location (physical and online) (JORDANOVA, 2016 [2012]; SHAFER, 1974 [1969]). Preliminary notes about the source's content and usefulness are also recommended to assist the historical researcher in organising the data (i.e., determining areas for further investigation) (SHAFER, 1974 [1969]). [14]

In historical method, the search for sources is moderately governed by factors that are extraneous to the study parameters. Factors such as language differences; archive location; source access; budget and time constraints, can threaten the credibility of the findings due to compromising the completeness of

evidence used for interpretation (BURTON, 2005; DALTON & CHARNIGO, 2004). While many of the decisions made regarding these practicalities are justifiable from a practical standpoint, there is the risk that this "make do" attitude can corrupt the evidentiary base from which the analysis is conducted (HUME, 2017; LEWENSON, 2008). Threats to credibility may also result in situations where archives restrict the copying or photography of original sources as the future analysis and interpretation of a source will most likely be based on the historical researcher's notes rather than the original source (BURTON, 2005; GIVEN & WILLSON, 2018). Hence, there is a risk that content of the source may be inadvertently misrepresented or misappropriated. [15]

Although historical researchers spend considerable time researching which archives and collections are most likely to yield relevant sources, this careful planning does not necessarily limit the serendipitous element of locating primary sources. The serendipitous discovery of primary sources commonly occurs during the "browsing" of secondary sources' footnotes and references (DALTON & CHARNIGO, 2004; GIVEN & WILLSON, 2018; TOMS & O'BRIEN, 2008; TRACE & KARADKAR, 2017). "Browsing" supports the inclusivity of potential sources and allows the researcher to develop a deep understanding of what is already known about the subject. However, when left unregulated it can snowball into an ad-hoc activity where the historical researcher loses sight of the planned search strategy (DELGADILLO & LYNCH, 1999; MAGES & FAIRMAN, 2008; TRACE & KARADKAR, 2017). As a result, the dependability of the study may become jeopardised due to the researcher being unable to clearly describe the decisions made during the search process (e.g., why a potential source was included or excluded from the study; what constitutes data saturation). [16]

Conducting an unstructured search also presents a threat to the confirmability of the research, as the researcher may be unaware of the presence of personal biases (HALLETT, 2008). Such biases can potentially cloud the decisions made during the search and may result in a misjudgement about a particular source. For example, a source that is deemed erroneous or contradictory to the sentiments detailed in other sources may be wrongly excluded from the study if the researcher does not explore how the emerging narrative portrayed in the other sources may be affecting the (preliminary) analysis of the event (ibid.). [17]

The development of a search protocol can assist in mitigating many of these expected and unexpected issues that are encountered in historical research (MACKIESON, SHLONSKY & CONNOLLY, 2018). When developing the protocol, historical researchers need to determine the research question and aims, key search terms, the inclusion and exclusion criteria, the proposed search strategies (e.g., databases, archives), the type of sources used (e.g., digital versus analogue sources; artefacts), and how the data will be stored and recorded (e.g., the use of reference management and/or spreadsheet software; MORRIS, 2016 [2012]). By articulating these decisions, historical researchers are able to preempt many of the hurdles likely to be faced during the search and take preventive steps to minimise their imposition on the search (e.g., securing appropriate funding). Once developed, the protocol should be reviewed and

updated regularly to reflect the search outcomes and any encountered issues. This practice serves as an audit trail that improves the study's dependability as it assists researchers to remain accountable for their decisions and actions during the search (MACKIESON et al., 2018; TRACE & KARADKAR, 2017). [18]

2.3 Source criticism and analysis

The next stage of historical method is *source criticism and analysis*. During this stage, each collected source undergoes further analysis and interpretation via the application of internal and external criticism. External criticism is the process in which the historical researcher determines the authenticity of the source (CHRISTY, 1975; SALEVOURIS & FURAY, 2015 [1988]). This is also referred to as determining provenance (WOOD, 2011). For written sources, many of the steps used to evaluate authenticity coincide with determining the bibliographical record of the source. Internal criticism is the process in which accuracy, reliability and credibility of the source is determined (SALEVOURIS & FURAY, 2015 [1988]; SHAFER, 1974 [1969]). In order to assess the source's accuracy, the researcher needs to consider the purpose, context and veracity of each source (WOOD, 2011). [19]

Once external and internal criticism are applied to the sources, the evidence is synthesised. This step requires the historical researcher to construct the information derived from the sources into an account to describe or explain the event or problem being studied (SHAFER, 1974 [1969]). The type of historical research used in the study determines how the historical researcher undertakes this analysis: a reconstruction or description of the event (Rankean/empirical method); a deconstruction of the event (postmodernist); or, meaning is constructed about the event (constructionist; MUNSLOW, 1997). [20]

A major criticism of historical research is the ambiguity that surrounds the decisions made by the researcher during the data analysis phase (GUNN & FAIRE, 2016 [2012]). While the reader can determine what sources were used in the analysis by referring to the citation information contained in the narrative, the processes for determining which sources were included or excluded from the study is sometimes less clear. The failure to clearly disclose such processes can lead to concerns regarding the appraisal of evidence including: Did the researcher use a specific method or appraisal tool to document how each source was evaluated for authenticity and accuracy?; Were pre-determined inclusion and exclusion criteria applied during the appraisal of sources (e.g., timeframe, setting, context or language restrictions)?; and, How did the researcher keep track of source details (e.g., handwritten notes or the creation of bibliographical records)? [21]

Failing to adequately address any of these elements during the initial phase of source criticism can affect the credibility and dependability of the study as using an unstructured appraisal tool and/or tracking method may result in the inclusion of a fake source or the inadvertent omission of a source that is pertinent to the study. Using a nebulous approach to source evaluation, particularly the failure to apply inclusion and exclusion criteria, can also impact the confirmability of the

study as the researcher's personal biases may influence the appraisal process. Adopting a methodological approach to source criticism, such as the use of a standardised appraisal tool, decreases this risk as it promotes consistency and therefore dependability (MACKIESON et al., 2018). Using a simple tool such as WOOD's (2011) five-part checklist (provenance, purpose, context, veracity and usefulness) for evaluating historical sources facilitates this process, allowing the researcher to document the outcomes for future reference. [22]

The credibility of the study can also be impacted by the way in which the researcher manages a source that is found to be incongruent to other sources examined. Differing models of historical method can influence how a paradoxical source is handled. For example, historical researchers who adopt a Rankean method will value official documents (e.g., court records) over discursive sources (e.g., letters) as the latter is viewed to be subjective (DONNELLY & NORTON, 2011). Postmodernist historical researchers argue that all sources, regardless of their origin or type, include an element of interpretation as the intentionality of the original author remains unknown (ibid., see also MUNSLOW, 2002). When considering how to handle the contradictory source, the researcher needs to analyse the lexicon and context (e.g., sociocultural and political climate) of the period being investigated as this may influence how information is presented within the source (McCULLAGH, 1991). By adopting this strategy, the historical researcher is able to consider each source in its context and identify possible overt and covert reasons why the source may be different to the wider frame of discourse (BARROS, CARNEIRO & WANDERLEY, 2018; MANSELL, 1999). For example, the language used in a court record is more formal and constrained than a personal account such as that conveyed in a letter or journal entry. [23]

Another strategy that can be used to limit the risk of mismanaging a paradoxical source is to adopt a GADAMERian hermeneutic approach to the interpretation (HALLETT, 2008). GADAMER's approach to hermeneutics promotes a bridge between the past and present that allows the researcher to balance the source author's original intentions (the "then") with the researcher's own beliefs (the "now") to generate new knowledge through a *Horizontverschmelzung* ("fusion of horizons"; BRADSHAW, 2013; GADAMER, 1979 [1960], p.539; HALLETT, 2008). This approach recognises that reading a source never occurs in isolation (BOELL & CECEZ-KECMANOVIC, 2010). Instead, it acknowledges researchers' interpretations are influenced by their worldviews, prior knowledge and a range of assumptions, biases, and contextual factors (HALLETT, 2008). The GADAMERian approach also acknowledges that a researcher's interpretation is constantly evolving due to the formation of a "circle of understanding", enabling the researcher to revise the interpretation as more reading and analysis takes place (BOELL & CECEZ-KECMANOVIC, 2010; GADAMER, 1979 [1960]; HALLETT, 2008). [24]

The methods used during data analysis can also impact on the credibility of the study. Unlike other fields of qualitative research where the analysis methods (e.g., thematic analysis, codification) are clearly described to the reader, the ways in which data is extracted from validated sources, interpreted and organised into

a narrative are seldom included in the historical narrative (SINN & SOARES, 2014). Failing to include these details creates uncertainty about a study's credibility as it is unclear to readers how the data have been scrutinised to enable the development of an informed interpretation. Hence, readers are unable to adequately discern if the researcher's interpretation of the event is plausible (MACKIESON et al., 2018). [25]

To address this limitation, historical researchers can utilise diagrammatical techniques, such as concept mapping, to help deepen their analysis. Concept mapping assists the researcher to explore and elucidate the initial inferences by creating a visual representation of the study's key concepts and corroborating evidence (DAVIES, 2011). Mapping out these variables encourages researchers to explore their reasoning by confirming causal relationships and highlighting potential associations, while also exposing areas that require further investigation (ibid.). [26]

Memoing, a strategy predominantly used in ground theory methodology, can also assist researchers to critique preliminary inferences (BIRKS, CHAPMAN & FRANCIS, 2008; CHARMAZ, 2015). Memo-writing assists researchers to refine their inferences by generating new ideas and exploring emerging patterns or associations that may be present in the sources (BIRKS et al., 2008; SALDANA, 2016 [2009]). Engaging in this process can assist in the construction of a meaningful and evidence-based interpretation, as researchers are encouraged to reflect and expound their thinking (CHARMAZ, 2015; SALDANA, 2016 [2009]). In historical research, memos can be used to: explore conjectures between seemingly unrelated data; question the nature of corroborating evidence; question the nature of conflicting data; identify the unknowns; and, examine how temporospatial considerations and context may have influenced the event. Examining each of these different areas allows researchers to take risks with their interpretation, as they are encouraged to investigate the extracted information from multiple perspectives (BIRKS et al., 2008). By taking these risks, researchers are more likely to develop a deeper understanding of the research topic (BIRKS et al., 2008; CHARMAZ, 2015). The preservation of such thought processes then acts as an audit tool for the researcher, thereby strengthening the dependability of the study (BIRKS et al., 2008). [27]

Seeking feedback from others is another strategy to confirm the cogency of the analysis. Communicating with an expert historian who is familiar with the subject matter can aid researchers in clarifying their thought processes through checking their inferences are congruous with what is already known about the topic (GILL et al., 2018). Alternatively, if oral histories are used, researchers can use member-checking to clarify if their interpretation of the event is consistent with the participant's interpretation and lived experience (BIEDERMANN, 2001; GILL et al., 2018). The implementation of these strategies strengthens the credibility of a study as the interpretation is triangulated with other corroborating evidence (BOWEN, 2009; LINCOLN & GUBA, 1985). [28]

Recognising the potential presence of unconscious biases, such as the influence of a prevailing metanarrative, is another important strategy to strengthen the analysis. Metanarratives are grand unifying systems of thoughts and beliefs that are accepted as the truth without exception (DU TOIT, 2011). Unmonitored metanarratives can distort a historical researcher's understanding of an event by introducing subjectivity into the interpretation—an already inherent risk of conducting historical research (CARR, 1961; DONNELLY & NORTON, 2011; HAMPSON, 1976; MUNSLOW, 2002). If left unchecked, these metanarratives can threaten the study's confirmability and credibility as it may lead the researcher to ignore a potentially plausible yet unorthodox explanation as it goes against popular or widely accepted discourse (BOWEN, 2009). [29]

Another unconscious bias that may influence a researcher's analysis is the presence of apophenia. Apophenia, also known as patternicity, refers to the identification of connections or meaningful patterns in disparate data, where no such relationship exists (FYFE, WILLIAMS, MASON & PICKUP, 2008; PAUL, MONDA, OLAUSSON & REED-DALEY, 2014; SHERMER, 2008). There is some evidence that individuals who regularly use pattern recognition in their profession (e.g., qualitative researchers, nurses, doctors) may be more prone to apophenia because they use this skill to inform their ways of knowing (BUETOW, 2019). If undetected, the presence of apophenia can result in the researcher using the sources to construct a fictional interpretation of the past event, thereby destroying the study's credibility (BUETOW, 2019). [30]

An inattention to these two unconscious biases may not only skew the data to privilege a false narrative, it also has ethical implications for the historical researcher (FINLAY, 2002; SANDELOWSKI, 1986). In order to minimise the risk of such biases influencing the interpretation, it is essential to consider each possible interpretation in context so that any (past and present) metanarratives, biases and other uncertainties can be identified and resolved (WOOD, 2011). Furthermore, engaging in reflexive activities can encourage the researcher to become more self-aware of potential biases and assumptions (CUNLIFFE, 2004). [31]

Reflexive techniques that may be useful to historical researchers include journaling and introspection. Regular reflection through journaling enables researchers to examine how their own subjective influences (e.g., preconceived notions or assumptions) may be influencing the analysis (BIRKS et al., 2008; CUNLIFFE, 2004). Through this articulation, researchers are then able to organise, critically evaluate and reconceptualise their thinking, resulting in the generation of new insights and understanding (ibid.). In contrast, introspection is a technique where researchers view themselves from an "outsider's" perspective in order to consider how underlying assumptions may be affecting their interpretation (BUETOW, 2019; FINLAY, 2002). Taking an "outsider's" perspective encourages researchers to question their decision-making during the analysis; and assists in identifying potential "blind spots" (FINLAY, 2002). These strategies enable researchers to become better aware of their own positionality within the study (BIRKS et al., 2008; FINEFTER-ROSENBLUH, 2017). In turn,

this increased awareness enables a deeper interpretation of the data, serving to strengthen the credibility and confirmability of the study. [32]

2.4 Dissemination

Outcomes of the analysis are disseminated via the historical narrative. While there are no specific rules that govern how the narrative should be written (i.e., it is researcher-dependent), some general recommendations exist regarding language use and the mechanics of writing (MEGILL, 2007). A neutral tone and objective language style are recommended (SHAFER, 1974 [1969]). Objectivity is promoted by the use of expository prose, a style of writing where the researcher presents (*exposes*) the material and explicates its meaning (DONNELLY & NORTON, 2011; LARSON, 1968). The narrative should demonstrate inclusiveness where all relevant sources are incorporated into the prose; and, any omissions or knowledge gaps are declared and justified to the reader to proffer a transparent account of the study topic (DONNELLY & NORTON, 2011). [33]

Recommendations also exist for the structural organisation of the narrative. The information included in the narrative needs to be presented as a lucid and coherent argument (ibid.). Direct quotes are used to elicit empathic responses in the reader and to demonstrate the judgements and conclusions made by the researcher during the analysis (LEWENSON, 2008; SHAFER, 1974 [1969]). Footnotes regarding source information and location are included in the narrative to guide the reader "to know *how* the writer knows" (GOTTSCHALK, 1969 [1950], p.19). Their inclusion helps to substantiate the historical researcher's analysis and interpretation. A second function of the footnote is to provide reference to other scholarly works that corroborate the researcher's argument (SHAFER, 1974 [1969]). In this case, the footnote validates the research by enabling the demonstration of inter-coherence with other scholarly works (DONNELLY & NORTON, 2011). The third function of the footnote is to provide additional information about a concept in circumstances where its inclusion in the prose is extraneous to the central tenets of the argument (i.e., it would interrupt the flow of the narrative; SHAFER, 1974 [1969]). Located at the end of the narrative are endnotes (longer explanatory comments that pertain to the entire topic), bibliographical references, and appendices (ibid.). [34]

The main mechanism for confirming rigour in historical research is via the narrative. A fundamental step in establishing rigour is the researcher's acknowledgement that the historical narrative is used not merely to retell a story about the past, but rather is a tool for dissemination that *affects* and *effects* others' understandings and opinions of the historical event (BARROS et al., 2018; MARWICK, 2001; MUNSLOW, 1997; WHITE, 1984). The primary reason for this power is the writing style used in the narrative (WHITE, 1984). As with any literary form, the writing style used by the historical researcher can mediate meaning-production in the reader through the use of semiotic mediation and the development of emphatic literacy (MORGAN & HENNING, 2013; VYGOTSKY, 2012 [1962]). Thus, the narrative can be seen not only as a vehicle of communication but also a vehicle of *persuasion*. The techniques used in crafting

historical narratives have traditionally paralleled many of the elements of fictional writing (e.g., the use of emplotment to chronicle events) and it is these discourse similarities that have arguably compromised the credibility of historical research (BARROS et al., 2018; GILL et al., 2018). If handled poorly, there is the risk that the narrative becomes a literary output where novelistic tendencies (e.g., description, dramatisation) are prioritised over scientific pursuits (e.g., analysis; WHITE, 1984). It is imperative that historical researchers present the narrative as a logical, transparent argument to maximise the reader's ability to make a sound judgement about the study and avoid the temptation "to engage the reader in a suspenseful, dramatic ... account of the study" (LEWENSON, 2008, p.40). Reflexivity can again be used as a strategy to assist this process by prompting researchers to evaluate (and realign) their writing style in order to separate "fact" from fiction (BARROS et al., 2018). [35]

Threats to a study's credibility also exist when the historical researcher fails to overtly disclose how the arguments made within the narrative are constructed (GILL et al., 2018). This predicament can arise when key elements are omitted from the narrative such as providing the evidence that a wide range of primary and secondary sources were used to develop and validate the researcher's interpretation. To counteract this risk, evidence can be provided through the prudent use of direct quotes, footnotes and endnotes placed throughout the narrative as a mechanism to substantiate claims and provide additional relevant information or bibliographical details about a particular source (SHAFER, 1974 [1969]). [36]

The historical researcher can strengthen the dependability of the study by providing a comprehensive description of the study design in the narrative. While this is an unorthodox approach (compared to the norms of a traditional narrative), descriptors that detail the search strategy, analysis methods and tools used to monitor biases, help the reader to evaluate the integrity of the study. Detailing the strategies employed to minimise potential biases to the reader also demonstrates how confirmability is promoted within the study. [37]

A failure to communicate these explanatory details in the narrative potentially causes a segregation of the research process from its end-product, the historical narrative. We describe this segregation as creating a "temporal apartheid"—symbolising the key processing, analytical and interpretative functions that occur within the temporal lobes of the human brain (HICKEY, 2013 [1981]). The outcome of this "apartheid" is that readers may be unable to follow the logic behind the researcher's suppositions, leading them to question the quality of the narrative. The use of this term is an extension of LEE's (2011) application where he described "temporal apartheid" as the misconception that a void separates the past and present. [38]

3. Conclusion

Qualitative historical research is a field of inquiry that examines a past event, epoch or phenomenon. Many of the methods used and decisions made throughout the historical research process are governed by the accessibility of sources, the physical environment and conditions imposed within an archive, yet these factors and their impact on the study design are somewhat understated in the historical narrative. Failing to divulge and rationalise such information, makes it difficult for others to evaluate the rigour of the study findings as they are unable to discriminate how the researcher's interpretation of the event is situated within the evidence. Such inarticulation compromises the overall trustworthiness and quality of the study, and reduces the acceptance of historical methodology as a whole. In order to address this methodological weakness, historical researchers can incorporate various strategies into the research process. Any strategy used to promote rigour in the historical study needs to be effectively communicated to the reader in the narrative. This initiative will reduce the ambiguity that surrounds historical methods through strengthening methodological literacy by separating "fact" from fiction. [39]

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Authors

Tanya LANGTREE, MNSt is a PhD candidate in the College of Healthcare Sciences, Division of Tropical Health and Medicine, James Cook University, Australia. Her research interests include nursing education, simulation and history. Tanya's PhD project is using historical methods to conceptualise the development of nursing practice prior to professionalisation.

Contact:

Tanya Langtree

Nursing and Midwifery
College of Healthcare Sciences
Division of Tropical Health and Medicine
James Cook University
1 James Cook Drive
Townsville QLD 4811 Australia

Tel: +61 7 4781 5355

E-mail: tanya.langtree@jcu.edu.au

Melanie BIRKS, PhD, is professor and Head of Nursing and Midwifery at James Cook University, Australia. Her research interests are in the areas of accessibility, innovation, relevance and quality in nursing education.

Contact:

Prof. Melanie Birks

Nursing and Midwifery
College of Healthcare Sciences
Division of Tropical Health and Medicine
James Cook University
1 James Cook Drive
Townsville QLD 4811 Australia

Tel: +61 7 4781 4544

E-mail: melanie.birks@jcu.edu.au

Narelle BIEDERMANN, PhD, is a senior lecturer in Nursing and Midwifery at James Cook University, Australia. Her research interests are in the areas of nursing and military history and nursing education.

Contact:

Dr. Narelle Biedermann

Nursing and Midwifery
College of Healthcare Sciences
Division of Tropical Health and Medicine
James Cook University
1 James Cook Drive
Townsville QLD 4811 Australia

Tel: +61 7 4781 6347

E-mail: narelle.biedermann@jcu.edu.au

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3.5 Summary

This chapter provided an overview of the conceptual decisions used to plan and guide this research. A qualitative paradigm was chosen to address the research aim and questions. Interpretivism and postmodernism were selected as the overarching philosophical perspectives for this study because these aligned with my worldview and axiology. Postmodernist historical method was selected as the most appropriate methodology because of the nature and scope of the research. The use of postmodernist historical method facilitated a critical examination of the underlying ideologies, assumptions and narratives surrounding pre-professionalised nursing praxis. Chapter 4 describes the specific methods used in this research.

Chapter 4: Study Design and Methods

4.1 Introduction

Chapter 3 introduced postmodernist historical research, the methodology used in this study. This chapter commences with a discussion of the study design employed for this research. This overview is followed by a detailed description of the specific methods used, along with justification for their use. The chapter concludes with a description of the ethical considerations that were applicable in this research.

4.2 Study Design

Study design refers to the overall strategy for investigating the research topic (Creswell, 2014). When planning the design of a research study, five questions should be considered:

1. How will the design connect to the paradigm being used?
2. How will these materials allow the researcher to speak to the problems of praxis and change?
3. Who or what will be studied?
4. What strategies of inquiry will be used?
5. What methods or research tools for collecting and analysing empirical materials will be utilised? (Denzin & Lincoln, 2005a, p. 376)

The researcher's responses to these questions are summarised in Box 4.1.

Box 4.1: Researcher's responses to Denzin and Lincoln's (2005a) guiding questions for planning study design

1. How will the design connect to the paradigm being used?

The study design supports and connects to interpretivism and postmodernism by:

- recognising that multiple realities exist

- identifying the researcher's subjectivity and its influence on analysis and interpretation
- deconstructing and re-examining the history of nursing's professionalisation by exploring prevailing assumptions and metanarratives about the cognitive, behavioural and affective aspects of pre-professionalised nurses
- giving voice to less powerful or visible stories about nursing through the examination of several non-Anglo-American sources
- acknowledging the temporal and contextual nuances of language, noting that the meaning of a word is inherently unstable
- using several non-traditional methods—their incorporation into the study acknowledges there are multiple ways of 'doing' and 'knowing'.

2. How will these materials allow the researcher to speak to the problems of praxis and change?

The outcomes of this research will provide a historical commentary on nursing theory and practice prior to professionalisation. This new knowledge will improve the profession's understanding about quotidian nursing praxis prior to the nineteenth-century reforms. As a consequence of this research, the popular rhetoric that surrounds early nursing practice may be disrupted, enabling a possible paradigm shift in how pre-professionalised nursing praxis is perceived by the broader profession.

3. Who or what will be studied?

Nursing theory and practice prior to the nursing reforms of the mid-nineteenth century will be conceptualised. Digitised primary sources that describe nursing practice prior to 1860 will be collected and analysed. Such contextualisation is pivotal to understand the evolution of nursing praxis and may also provide important insights into how underlying factors (e.g., habits and ideologies) continue to influence contemporary nursing practice.

4. What strategies of inquiry will be used?

A thematic analysis of these digitised primary sources will be used to conceptualise pre-professionalised nursing praxis. Secondary sources will be used to inform analysis and assist with contextualising the primary sources.

5. What methods or research tools for collecting and analysing empirical materials will be utilised?

Methods are the 'doing' actions of research. They are the tools and techniques used to collect, analyse and synthesise data (Carter & Little, 2007; Crotty, 1998). Traditional historical methods, including source criticism, close reading and contextualisation of the historical

narrative with footnotes, will be used in this project. However, the research topic, postmodernist perspective and use of digitised sources in this study also introduce a range of non-traditional, technology-dependent methods. For example, CAQDAS may aid the management and synthesis of evidence. Blending these two approaches to data collection, analysis and dissemination advances the use of digital technologies in historical method.

These responses to Denzin and Lincoln's (2005a) posed questions are summarised through a schematic depicting the study design for this research project (see Figure 4.1).

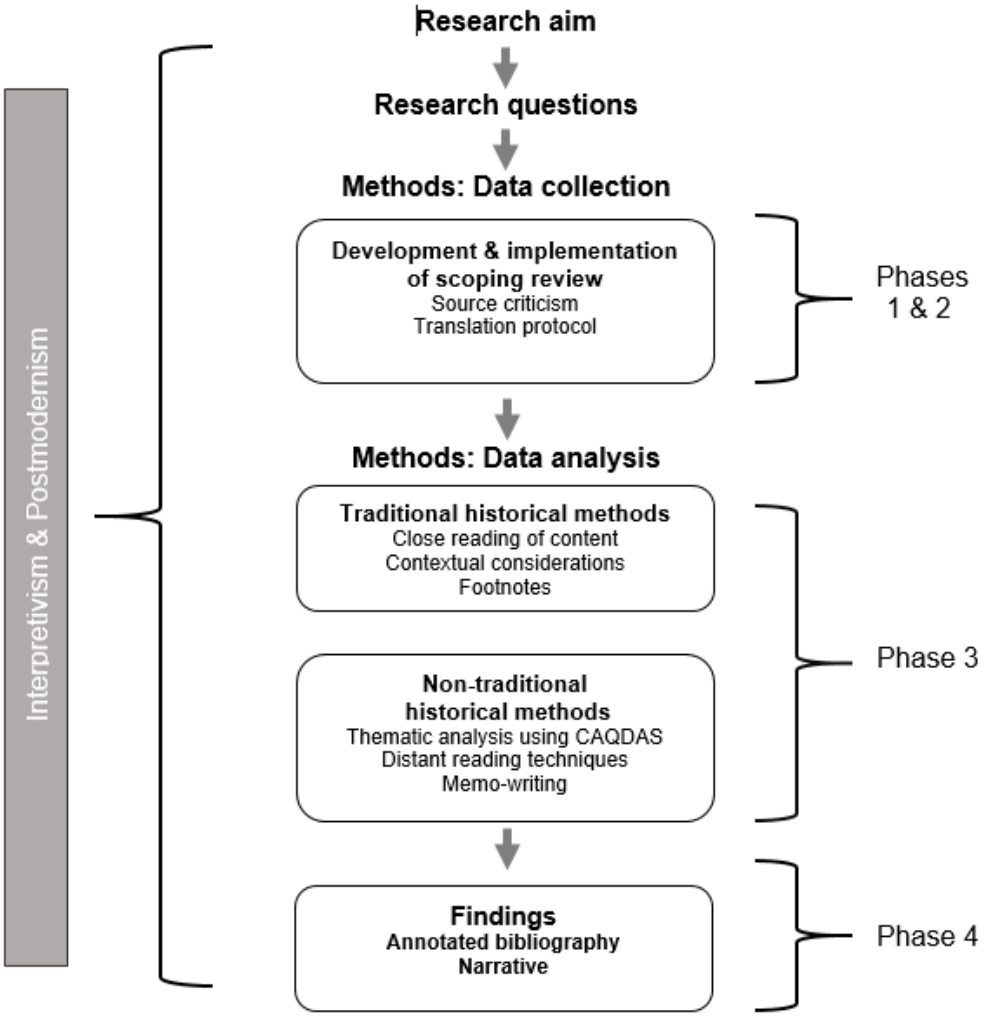

Figure 4.1: Study design schematic

This schematic illustrates the four main phases in this research project: development of a scoping review protocol for use in historical research; implementation of the scoping review; analysis and interpretation; and dissemination of the research findings. Table 4.1 summarises the study phases and methods used in this study.

Table 4.1: Summary of the different study phases and methods used in this study

Research design	Postmodernist historical method
Phase 1: Development of scoping review protocol	Modified Arksey and O'Malley (2005) framework Adherence to Preferred Reporting Items for Systematic Review and Meta-Analyses—Protocols (PRISMA-P) 2015 statement
Phase 2: Implementation of scoping review	Data collection and collation Source screening Source criticism Translation of non-English sources Machine translation – Babylon Pro and Google Translate Review and manual editing
Phase 3: Analysis and interpretation	Traditional historical methods Close reading Contextual considerations Footnotes Thematic analysis using CAQDAS Coding Distant reading analytics Memo-writing
Phase 4: Dissemination	Annotated bibliography Narrative (see Chapter 7)
Data management tools	NVivo (version 11) for Word Microsoft (MS) Excel Microsoft (MS) Word EndNote X8
Ethics approval	Exemption granted from JCU HREC—March 2018

As indicated in the schematic and accompanying table, preparing for and collecting data occurred in Phases 1 and 2 of the study. Data analysis took place in Phase 3 and dissemination

of the study findings occurred in Phase 4. The methods employed in this study are explicated in the following sections.

4.3 Phase 1: Development of the Scoping Review Protocol

The mass digitisation of analogue sources (e.g. books, newspapers and official documents) that has occurred over the past two decades and the plethora of digitally-born materials (e.g., e-books, e-mails, blogs, webpages, social media outputs) now available for research have profoundly changed how historical research is conducted (Hitchcock, 2013; Nicholson, 2016). With these advances, however, arises new challenges in containing online searching and accurately reporting the location of sources. Currently, there is a gap between the incorporation of online searching and digitised sources into historical research and the praxis behind their use—we forgot to theorise how and why these methods should be used in contemporary historiography (Underwood, 2014).

To address this gap, alternative data collection methods commonly employed by other qualitative researchers were initially critiqued. After this critique, a scoping review was identified as a potential method for data (source) collection. A scoping review, also known as a mapping review, is one of 14 different types of reviews that can be used to synthesise evidence (The Joanna Briggs Institute, 2015). Scoping reviews are used to rapidly map evidence or concepts when little is known about the research area (Arksey & O'Malley, 2005; Dijkers, 2015; Tricco, Straus, & Moher, 2015). Through mapping the data, the researcher gains a deeper conceptual clarity about the research topic by a) exploring the research that has already been performed; and b) identifying gaps in the literature (Arksey & O'Malley, 2005; Colquhoun et al., 2014; Levac, Colquhoun, & O'Brien, 2010; Pham et al., 2014). Comparing the potential benefits of conducting a scoping review with the research topic, aim and questions of this

project provided further confirmation that a scoping review for source collection and collation was appropriate for this study.

Prior to the scoping review, a scoping review protocol was developed (see Box 4.2). Constructing this protocol was pertinent in ensuring consistent decisions were made about the search strategy and screening of all prospective sources (Moher et al., 2015; Tricco et al., 2015). The protocol also enabled systematic reporting of the methods used for data collection; therefore, it increased the dependability of the study. The scoping review protocol used in this study was developed using the Preferred Reporting Items for Systematic Reviews and Meta-Analyses—Protocols (PRIMSA-P) 2015 guidelines. Adhering to this reporting guideline ensured the review was structured so that it was reproducible and transparent to others (Colquhoun et al., 2014; Moher et al., 2015).

Box 4.2: Scoping review protocol—Final version, November 2018

Scoping review protocol

Aim and objectives

The aim of this review is to conceptualise the progression of nursing theory and praxis prior to professionalisation. The objectives of this review are to: (1) determine the volume of nursing-specific manuscripts that were published in Western countries prior to 1859; and (2) analyse the themes contained within these manuscripts to determine the breadth and depth of nursing theory and praxis prior to professionalisation.

Methods

A scoping review will be performed to map and document nursing-specific manuscripts published prior to 1859. The methods used in this scoping review are based on the framework outlined by Arksey and O'Malley (2005) and incorporate the recommendations of Levac et al. (2010). To reflect the types of materials that will be examined in this review, the term 'study', used throughout Arksey and O'Malley's (2005) framework, has been substituted with 'source'. Consequently, the stages of this review will be: identifying the research question, identifying relevant sources, source selection, charting the data, collating, summarising and reporting results and consultation.

Identifying the research questions

The research questions used for this review are:

- What manuscripts describing nursing practice were produced in Western countries prior to 1859?
- How was nursing theory and practice conceptualised prior to professionalisation?

Identifying relevant sources

Eligibility criteria

The following inclusion criteria will be used to guide the search and for screening and reviewing potential primary sources:

- A manuscript is a written document (e.g., book, book chapter, manual, treatise, governance document or letter).
- The manuscript is identified as a non-fiction work that is nursing-specific.
- The manuscript is authenticated as a primary source (i.e., it is an original manuscript written during the period under investigation).
- A digitised copy can be sourced.
- The manuscript was produced in a Western country.

- The manuscript has been written in any language. Google Translate will be used during the search, screening and reviewing of non-English sources to determine the eligibility of a source.

A secondary source is a document that is written about a past event after some time has elapsed (Donnelly & Norton, 2011). Secondary sources will be included in the initial screening phase to assist in the location of primary sources. However, they will not be included in the results of this review. The following inclusion criteria will be applied when screening potential secondary sources:

- The document describes nursing practice prior to 1859.
- The document includes the title of a prospective primary source.
- The document has been written in any language. Non-English documents will be translated using Google Translate to permit screening.

The following exclusion criteria will be used to guide the search and while screening and reviewing potential sources. Sources will be excluded if they are:

- a primary source written after 1859 or produced in a non-Western country
- a primary source that is unable to be located, is determined to be fiction, or fails to be authenticated
- a potential primary or secondary source that predominantly describes non-nursing practices (e.g., focuses on describing medical or midwifery procedures)
- a secondary source that fails to mention a primary source.

Search strategy

The search strategy has been devised with the assistance of a medical and health sciences librarian who is experienced in performing systematic reviews. The search terms will be initially broad to enable the screening of a diverse range of literature that describes aspects pertaining to the history of nursing, medicine and health sciences prior to 1859 (Appendix A). Key search terms will include 'rare books', 'nurses', 'manuscripts', 'history of nursing' and 'history of medicine'. No language restrictions will be imposed during the search.

Databases

The key search terms will be input into MEDLINE, CINAHL, JSTOR, Scopus and Project MUSE. This process will identify potential sources via: a) locating the citations of rare nursing and/or medical books included in the databases (i.e., potential primary sources); and, b) locating any literature on the history of nursing prior to 1859 (i.e., potential secondary sources that may be useful during the hand-searching stage). Concurrent searching of potential sources will be performed using online archives: Google Books, Internet Archive, Hathi Trust Digital Library, Wellcome Library, Project Gutenberg and Europeana Collections. A general search of targeted professional association websites will be conducted to identify any further sources: the American Association for the History of Nursing, the Canadian Association for the History of Nursing, the European Association for the History of Nursing (and its subgroups), the American Association for the History of Medicine, the Canadian Society for the History of Medicine and the European Association for the History of Medicine. The search will be conducted in early 2019.

Data management

All search results will be exported to the online reference management software program, EndNote X8, to delete any duplicate records and permit screening and data extraction processes. The full-text digitisations of the final selected sources will be stored in the software program, NVivo 11, to facilitate source criticism and close reading. Memos will be used to document the search strategy as it progresses.

Source selection

Process for selecting primary sources

Potential primary sources will be screened by reviewing the title and front matter of the manuscript (see Figure 4.2). If the potential primary source meets the eligibility criteria, it will undergo source criticism to determine its authenticity and accuracy. Source criticism will be performed using an appraisal tool adapted from Wood's (2011) five-step process for evaluating historical sources: assessing *provenance, veracity, purpose, context* and *usefulness* (see Appendix B). To enhance the evaluation of external criticism (determining authenticity) and internal criticism (determining accuracy) of each source, the original questions posed by Wood (2011) have been refined and expanded to include other authors' recommendations (Donnelly & Norton, 2011; Mages & Fairman, 2008; Wall, 2006).

Locating primary sources via the screening of secondary sources

To locate a wider range of primary sources, potential secondary sources will also be screened. This screening will be accomplished by reviewing the title and abstract of each potential secondary source to determine if the document meets the inclusion criteria. If the document is determined to be relevant, its content and references will be hand-searched to

identify any reference to a potential primary source (i.e., a manuscript describing nursing practice). If a potential primary source is found in the prose or reference list of an article, the primary reviewer (TL)[30] will attempt to locate a digitised copy of the manuscript via one of the online archives or reputable websites listed above. When appropriate, the author of the secondary source will be contacted for assistance in locating the potential primary source. Once located, the potential primary source will be screened and authenticated using the processes described above.

Addressing source authentication concerns

In circumstances in which the primary reviewer (TL) has concerns regarding the authenticity or accuracy of a source, a second review of the source will be conducted by an experienced historian (NB)[31] using the same tool. The second appraisal will be compared with the original evaluation to determine if the source should be included in the study.

Charting the data

EndNote X8 will be used to generate the bibliographical details of each eligible primary source. The data collected from each source will include source title, author publication details (year, location, publisher and edition), language, purpose, intended audience and archive locations (physical and online including retrieval URL). Any additional information that may be useful for further analysis, including the design and layout of the manuscript (e.g., number of pages, chapters, pictorial information, and/or front matter), concerns regarding the accuracy or authenticity of the source and relevant secondary sources will be recorded in a separate memo using NVivo 11.

[30] Tanya Langtree
[31] Narelle Biedermann

Collating, summarising and reporting results

A folder will be created for each primary source in NVivo 11. This approach will enable a copy of the digitised source to be stored with other relevant information pertaining to that source (secondary sources, memos) while also allowing the thematic analysis to be conducted. The outcomes of the thematic analysis will be presented as a narrative created in Microsoft Word. The generated PRISMA flow diagram will be included in the final report of the scoping review. An annotated bibliography of the corpus will also be produced to provide a chronological account of early nursing manuscripts.

Consultation

While consultation is considered an optional stage by Arksey and O'Malley (2005), it is believed to be an integral stage of this review given the uniqueness of the topic. Several nursing historians from Europe, North America and Australia will be contacted via email to request assistance with locating potential sources.

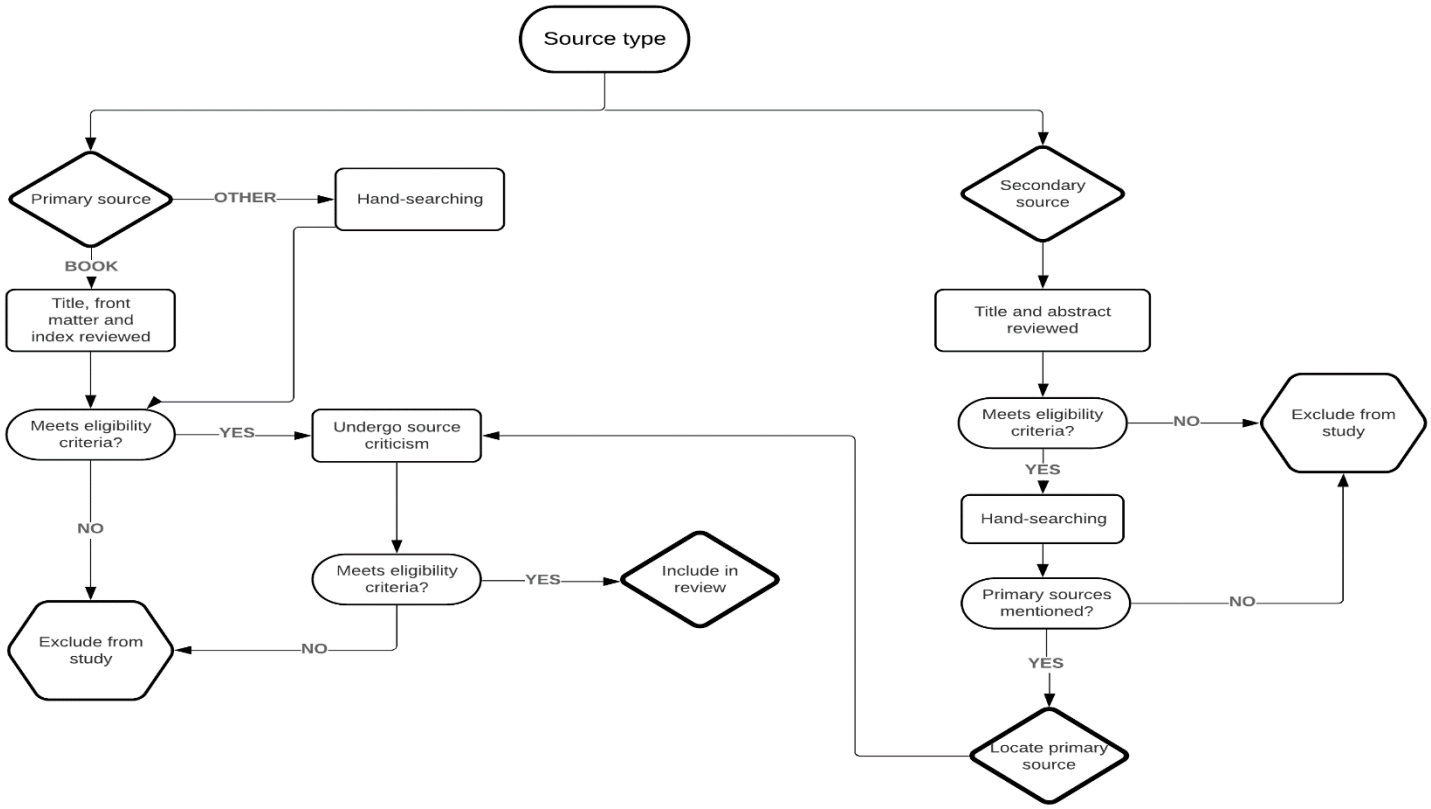

Figure 4.2: Database screening and selection of sources

4.4 Phase 2: Implementation of the Scoping Review

The second phase of the study was conducting the scoping review. The review involved a search of multiple electronic databases and digital archives for primary and secondary sources that met the eligibility criteria as defined in the protocol. The scoping review was performed in March 2019. The outcomes of the review are reported in Chapter 5.

4.4.1 Translation protocol

The eligibility criteria for the scoping review permitted the use of digitised primary sources written in any language. To permit the initial screening of the foreign language sources, and when appropriate, further analysis, these sources needed to be translated into English. A translation protocol was produced to ensure consistent handling of such sources (see Figure 4.3). The developed protocol incorporated the two methods of translation currently available—machine translation (MT) and human translation (HT).

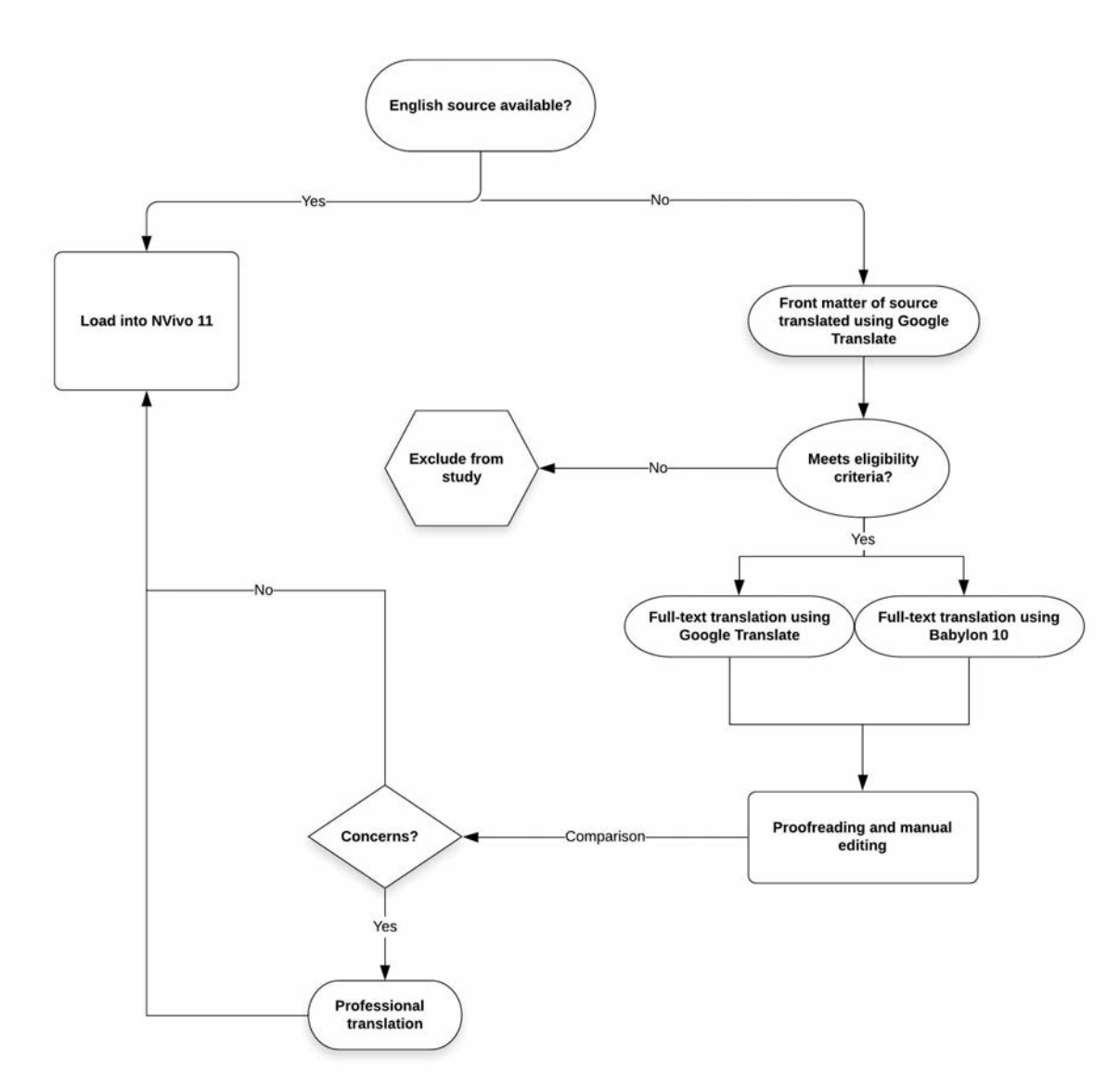

Figure 4.3: Translation protocol used in this study

MT uses a computer to translate text used in a source language into a target language (Zong, 2018). The capabilities of MT have evolved over the last 70 years as information and computer technologies have advanced (Groves & Mundt, 2015; Lotz & Van Rensburg, 2014). There are three main forms of MT (Lee, 2019; Zong, 2018):

1. The original rule-based MT produces word-for-word (dictionary-matched) translations.
2. Statistical computer-aided translation (also known as statistical MT) uses statistics to predict the probability of translated phrases rather than word-for-word translation.

3. Neural MT uses artificial intelligence (AI) techniques such as natural language understanding, natural language processing and deep learning to facilitate the translation.

The most well-known example of neural MT is the latest version of Google Translate (released in late 2016), which uses its own Neural Machine Translation System (NMTS). Studies have found that a NMTS reduced the risk of translation errors occurring in Google Translate by approximately 60% (for English ⇆ Spanish, English ⇆ Chinese and English ⇆ French translations) when compared to its previous phrase-based translation system (Castelvecchi, 2016; Wu et al., 2016). This significant reduction in reported inaccuracies has led to Google Translate being trialled for a range of different applications, including assisting with developing English writing skills for individuals with English as a foreign language[32] (Lee, 2019), reviewing the accuracy of translated political speeches within the European Union[33] (de Vries et al., 2018) and producing multilingual patient educational resources (Khoong, Steinbrook, Brown, & Fernandez, 2019). In the latter study, routine emergency department discharge instructions used Google Translate to translate from English to Spanish and Chinese, before being compared to a dataset that had been professionally translated. The findings reported 92% of Spanish-translated sentences were accurate, which suggested that MT-generated instructions can be used to supplement English instructions (Khoong et al., 2019).

HT occurs when an individual manually translates all aspects of the source language into the target language. Currently, HT is considered the highest standard of translation due to the human translator being aware of a language's rules and exceptions to the rules (Lotz & Van Rensburg, 2014). For example, human translators are more likely to detect and correct

[32] This study found that using Google Translate significantly decreased the number of vocabulary and grammar errors in university students' English writing skills (Lee, 2019).
[33] This study found that Google Translate produced a similar quality translation to human translation for bag-of-words modelling in natural language processing (de Vries, Schoonvelde, & Schumacher, 2018).

misspellings and accommodate language semantics, such as idioms or metaphors (Zong, 2018). Despite being the preferred translation mechanism, relying solely on HT is largely prohibitive because there may not be ready access to a translator who is proficient in the language, as well as issues regarding associated costs and duration of manually translating documents (de Vries et al., 2018). These limitations have influenced multilingual organisations such as the United Nations and European Union to offer both HT and MT services.

When developing the translation protocol employed in this study, the benefits and drawbacks of both translation methods were reflected upon before considering how their use would affect the quality of source translation and analysis of the corpus (see Table 4.2).

Table 4.2: Comparison of MT and HT and their likely effect on primary source translation and corpus analysis

	Machine translation	**Human translation**
Benefits	• Immediate • Accessible • Free or relatively inexpensive • Accuracy rates have improved dramatically over last five years due to AI advances	• Higher lexical and grammatical accuracy rates
Drawbacks	• Accuracy rate is dependent on factors difficult to control, including the document's quality of the optical character recognition, the source language used and the program's ability to recognise patterns within sentence structures	• Slower • Expensive[34] • Pertinent data within sources is most likely archaic medical jargon—professional translators would have difficulty comprehending the intended meaning from such parses[35]

[34] One quotation received for a nineteenth century German source was over A$30,000.
[35] For example: making the link between humoral physiology and treatment regimens.

Articulating these benefits and drawbacks identified that relying on professional translation services is impractical due to various factors: the associated costs, time taken to manually translate all non-English sources and the difficulties in sourcing a specialist translator who could not only translate archaic medical terms but also contextualise their meaning to early modern healthcare provision.

While investigating the pros and cons of using HT, it was also discovered that many professional translation services routinely offer MT as either a standalone service or MT with human post-editing (PE) (Massardo et al., 2016). PE can be used to improve the target language translation by correcting inconsistencies or ambiguities in terminology, enabling the suitable handling of proper nouns and correcting sentence structure so that the original intended message of the source document is maintained (Massardo et al., 2016).

4.4.2 Rationale for translation protocol design

Two MT tools, Google Translate and Babylon 10 Premium Pro, were incorporated into the translation protocol. Google Translate was deemed an appropriate tool because it is a leader in NMT technology. It was used to conduct a preliminary translation of each potential source's front matter during the screening stage of the scoping review, as well as to translate the full-text of eligible non-English sources. Babylon 10 Premium Pro was used to conduct the second full-text translation of each non-English source. This tool was selected as the second method of MT due to Babylon's reputation as a foremost commercial MT company and the software's ability to interface with the Microsoft Office suite (Taylor, Cricton, Moult, & Gibson, 2015). The second full-text translation was employed as an additional safeguard measure to reduce the risk of misinterpretation, a strategy that proved to be a useful benchmarking exercise and aided in detecting areas of concern during the PE stage.

After reviewing the activities involved in PE, I decided to undertake this task because I wanted to engage in close reading. To prepare for this task, I commenced learning Spanish in early 2017. When performing the scoping review in 2019, I found my written comprehension of Spanish sources and, as an extension, Portuguese sources, was sound—I could understand most sections of these sources prior to running them through the MT tool. Other steps used to train my language skills included:

- using the digitised source of *Instruccion de Enfermeros* (and its professional English translation) as a cross-reference tool to confirm my understanding of Spanish
- undertaking preliminary archival work in Madrid and Seville (May–June 2017)
- refreshing my conversational French language skills by undertaking comprehension activities on online apps (e.g., Duolingo)
- creating a 'living' bilingual reference tool of frequently used words for each source language (i.e., Spanish, Portuguese, French and German)
- focusing on translating one language at a time (an effective strategy as many medical terms used in the Spanish, Portuguese and French sources were comparable due to their Latin roots)
- referring to the bilingual dictionary provided in Babylon 10 Premium Pro and online reputable bilingual dictionaries such as the *Diccionario de la Lengua Espanola* (commonly known as the *DRAE*)—the dictionary of *Real Academia Espanola* (Royal Spanish Academy)[36]
- checking my comprehension with friends and colleagues who are native German and Spanish speakers.

[36] The *Real Academia Espanola* are responsible for maintaining lexical norms and standards within Spain. The first edition was published in 1780.

My natural affinity to quickly comprehend foreign languages (I have previously studied Japanese and conversational French) and past technical editing experience also assisted in performing this task.

4.4.3 Preparing digitised sources for full-text translation

Several preparatory steps were required prior to undertaking the full-text translations of the non-English sources. First, the download formats of the digitisation that available for the translation needed to be checked. A plain text format was preferable and was used if the optical character recognition (OCR) accuracy rate was reported as at least 90%. Figure 4.4 provides an example of the reported OCR accuracy rate for a plain text download option of a nineteenth-century French nursing text.

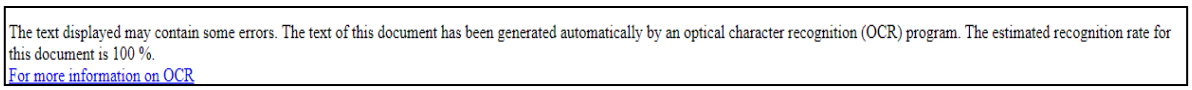

Figure 4.4: An example of OCR accuracy rate for a plain-text version of *Manuel du Garde-Malade, des Gardes des Femmes en Couches et des Enfans au Berceau* (1815).

Retrieved from https://gallica.bnf.fr/ark:/12148/bpt6k6535208s/f1n130.texteBrut

If the plain text forms of the source were unavailable, or the OCR accuracy rate was not reported, the PDF of the digitised source was used. Several preprocessing steps designed to increase the OCR were employed to enhance the readability of the PDF prior to importing it into the MT tools. Nonetheless, some digitised sources were of such poor quality (e.g., the sixteenth-century sources) that the OCR was extremely compromised, and the sources were unable to be run through the MT tools. This issue was managed by manually transcribing the prose of key sections of the source into a Word document prior to importing it into the MT tools.

Once the full-text translations had been undertaken, the two English translations were then proofread and edited before being compared. Usually, the translation produced with Google

Translate was found to be generally more comprehensible. Where terms were not translated or inconsistencies were identified between the two translations, further PE techniques were applied. For example, digitised reference materials such as archaic medical and bilingual dictionaries were used to check the meaning of specific medical terminology and/or better understand the procedural aspects of certain medical treatments. Further corrections to the translations were implemented so that one English translation was generated. Subsequently, copies of the final translated version and the original source were stored in NVivo 11. The processes for preparing the digitised non-English source for further analysis are summarised in Figure 4.5.

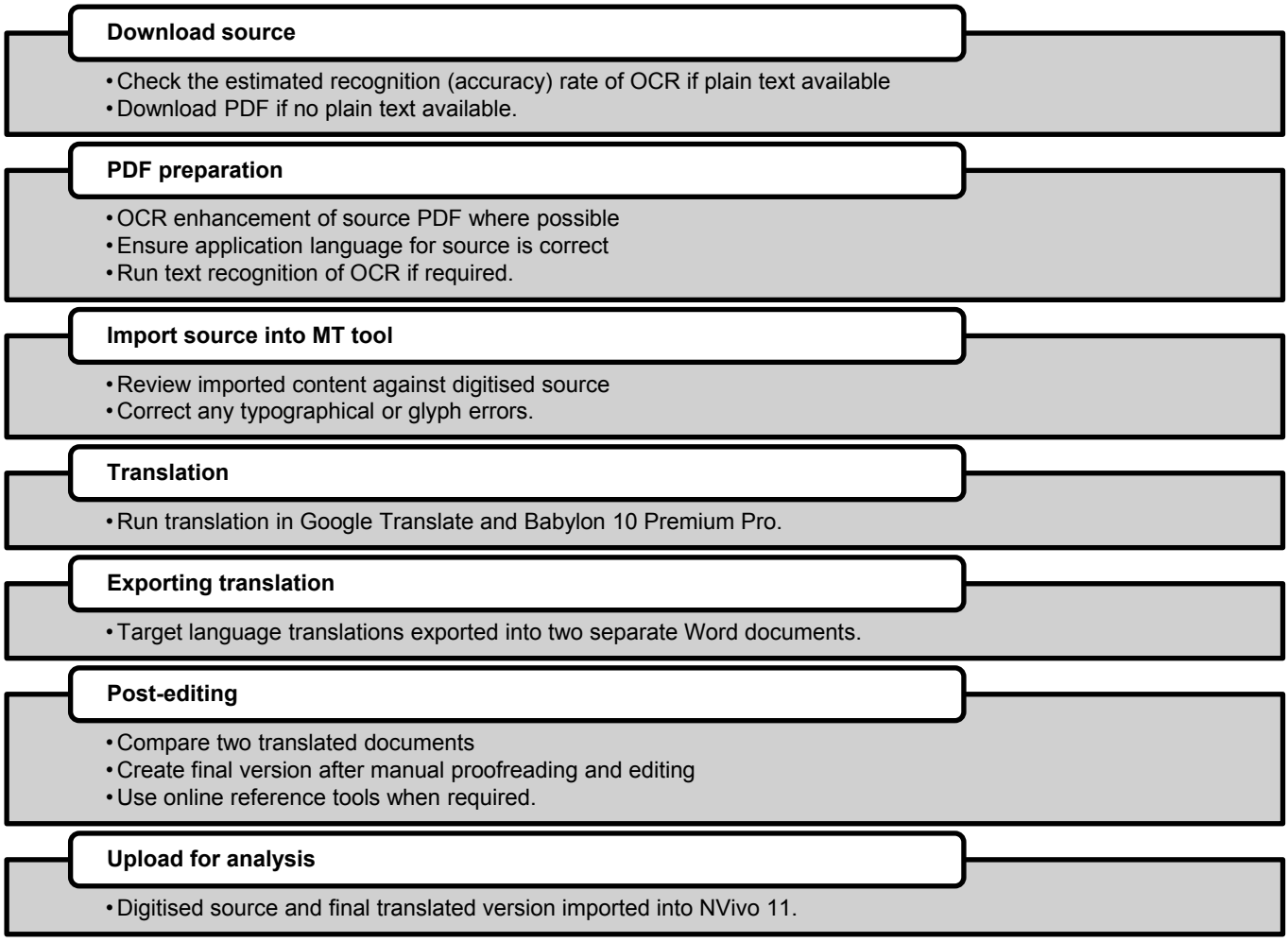

Figure 4.5: Preparing a non-English source for translation

4.5 Phase 3: Analysis and interpretation

The study's third phase commenced with analysing and interpreting each source. The analysis used an inductive approach to identify the key concepts and contextual elements of each source (Braun & Clarke, 2006). Next, these were comparatively explored within the corpus to identify the themes. NVivo 11 was used to manage the data because it allowed for a consistent and systematic approach to analysis and interpretation, it assisted with contextually situating the analysis and it enabled an audit trail for review.

4.6 Phase 4: Dissemination

The study findings are presented in Chapters 5 and 6. Chapter 5 describes the findings from the scoping review and provides an annotated bibliography of the corpus. This annotated bibliography was compiled to provide the audience with a contextualised and chronological account of the progression and regression of early nursing and summarise the corpus. Chapter 6 conceptualises pre-professionalised nursing theory and praxis by presenting generated themes within the data as a narrative. This narrative incorporates the general stylistic norms previously explained in Chapter 3 and other suggestions by Donnelly and Norton (2011) and Salevouris and Furay (2015) (see Table 4.3).

Table 4.3: Stylistic norms of historical narrative writing

Element	Suggested Stylistic Norms
Structure	• provide an explanatory introduction that guides the reader of the narrative's outline • adopt either an analytical or narrative-focused writing style • implement footnotes and bibliographical referencing • use invocations of authority and intra- and inter-coherence[37] • include direct quotes wisely • provide substantiating and countervailing evidence

[37] Intra-coherence is the internal coherence of the narrative/analysis, whereas inter-coherence is the narrative's coherence with other works on the same topic (Donnelly & Norton, 2011).

	• explain the context of the period being studied.
Mechanics of writing	• maintain clarity of expression (lucidity) • avoid concealing gaps or uncertainties of knowledge.
Language	• adopt a neutral and de-contextualised tone to maintain objectivity • use expository prose rather than descriptive prose.[38]

Adapted from Donnelly and Norton (2011) and Salevouris and Fouray (2015).

While considering each phase of the study design, the option of incorporating novel technology-assisted methods was also examined. The publication 'Risky Business? Addressing the challenges of historical methods in the "digital age" ', presents an in-depth exploration of the additional methods employed in this study.

[38] Expository prose is where the narrative presents (exposes) and analyses concepts or ideas, whereas descriptive prose is a narrative in which provides a description of an event (Donnelly & Norton, 2011; Larson, 1968).

4.7 Publication 3

Risky business? Addressing the challenges of historical methods in the 'digital age'

Ms Tanya Langtree
Professor Melanie Birks
Dr Narelle Biedermann

Submitted to: *Collegian*

Status: Under review (submitted March 2020)

James Cook University

Declaration by Candidate for Research Article

Chapter 3 publication	Name and Signature	Nature of contribution
Langtree, T., Birks, M., & Biedermann, N. Risky business? Addressing the challenges of historical research in the 'digital age'. Manuscript submitted for publication.	Tanya Langtree	Concept development and key ideas, writing, review and implementing revisions Preparation for submission.
	Melanie Birks	Supervision of concept development and ideas Critical review Approval of final version.
	Narelle Biedermann	Supervision of concept development and ideas Critical review Approval of final version.

Risky business? Addressing the challenges of historical methods in the 'digital age'

Tanya Langtree[a]*, Melanie Birks[a] and Narelle Biedermann[a]

[a] *Nursing and Midwifery, College of Healthcare Sciences, James Cook University, Townsville, Australia*

*Nursing and Midwifery, College of Healthcare Sciences, James Cook University, 1 James Cook Drive, Townsville QLD 4811, Australia.
Email: tanya.langtree@jcu.edu.au
Ph: +61 (07) 47815355

Notes on contributors

Tanya Langtree, RN, MNSt is a lecturer and PhD candidate in Nursing and Midwifery at James Cook University, Australia. Her research interests include nursing education, simulation and history. Tanya's PhD project is using historical methods to conceptualise the development of nursing practice prior to professionalisation. ORCID: https://orcid.org/0000-0002-0622-8044

Melanie Birks, RN, PhD is professor and Head of Nursing and Midwifery at James Cook University, Australia. Her research interests are in the areas of accessibility, innovation, relevance and quality in nursing education. ORCID: https://orcid.org/0000-0001-7611-4272

Narelle Biedermann, PhD is a senior lecturer in Nursing and Midwifery at James Cook University, Australia. Her research interests are in the areas of nursing and military history and nursing education. ORCID: https://orcid.org/0000-0002-8344-5069

Running head: Risky business?

Risky business? Addressing the challenges of historical methods in the 'digital age'

ABSTRACT

Background

The 'digital age' has led to a renaissance in historical methods. The way in which nurse historians can search, collate and analyse sources has changed exponentially over the past two decades. The mass digitisation of books, newspapers and other documents has resulted in the removal of many long-standing barriers to performing historical research, such as budgetary and access restrictions. Despite these expanded opportunities, the nurse historian now faces new challenges when performing historical research.

Aim

This paper aims to stimulate discussion on the risky business of conducting nursing historical research in the 'digital age'. In this paper, we examine the technology-born challenges encountered by nurse historians with the objective of proffering potential solutions to address such issues.

Discussion

Three contemporary challenges faced by nurse historians are: not knowing how to contain and articulate online searching; being unable to reduce the number of optical character recognition inaccuracies with digitised archaic sources; and being unsure of how to safely incorporate technological tools into historical analysis.

Conclusion

Used correctly, new technologies can augment and strengthen traditional historical methods. Nurse historians need to be mindful that the way in which technologies are used is controlled by the *user*, rather than the technology *itself*.

Keywords: Digital research; digitisation; historiography; history of nursing; nursing research.

SUMMARY OF RELEVANCE

Problem/issue

Nurse historians remain ill-equipped to navigate the use of digital technologies in their research. Used inappropriately, these technologies can dilute the rigour of their research outputs.

What is already known

The 'digital turn' has created new challenges and controversies in how to conduct historical research in the 21st century.

What the paper adds

This paper contributes to the scholarship of historical methods in the 'digital age' by presenting a commentary of the challenges encountered by nurse historians when using digital technologies.

1. INTRODUCTION

The 'digital age' has led to a renaissance in historical methods. The methods by which nursing historians collect and analyse sources are profoundly different from the practices employed two decades ago (Nicholson, 2016). Mass digitisation of books, newspapers and other primary sources has resulted in the historian being able to access 'big data' - volumes of text corpora - with just one click of the mouse. Being able to complete large (if not all) amounts of research online has eliminated many source access barriers once faced by the historian, such as securing funding to access those frequently hard-to-find collections in distant archives (Toms & O'Brien, 2008). In turn, historians are more open to investigating a wider range of research topics.

Despite the expanding possibilities for historical research, the emergence of 'big data' and digital research have created their own challenges and controversies (Cristianini, Lansdall-Welfare, & Dato,

2018; Drouin, 2014; Grossman, 2012). Concerns have been raised about: the legitimacy and quality of digital scholarship (Hitchcock, 2013; Huistra & Mellink, 2016; Knoblauch & Tomes 2014); the ethics of digitisation (Moravec, 2017); the preservation and safeguarding of digitised sources (Gailey, 2012); the impact of digitisation on library and archive budgets (Moravec, 2017); the risk of decontextualising the analysis (Hitchcock, 2013; Putnam, 2016); the usability and reliability of analytical tools (Cristianini et al., 2018); and, whether this 'digital turn' is just a passing trend (Knoblauch & Tomes, 2014).

While many of these concerns are valid, the 'digital age' is not repealing. Rather than shying away from digital technologies, nurse historians need to be at the forefront of conversations about their use and impact on historical methods (Grossman, 2012; Hitchcock, 2013; Huistra & Mellink, 2016; Putnam, 2016). Used correctly, such technologies can be an opportunity to address areas of methodological weakness (Knoblauch & Tomes, 2014). Used poorly, such technologies can weaken the rigour and quality of historical research. In this article, we examine several strategies that can aid the novice historian to navigate the risky business of conducting nursing historical research in the 'digital age'.

2. BACKGROUND

The advances in information technology over the past two decades has revolutionised how evidence is searched, collated and analysed in historical methods. A 'digital turn' has occurred (Nicholson, 2016) – the methodology is fundamentally changed. The time-honoured traditions of the past no longer match how the majority of nurse historians conduct and use historical research, yet we are at an impasse for knowing how to suitably advance the methodology (Hitchcock, 2013; Hoekstra & Koolen, 2019).

Not since the 'linguistic turn' has historians, including nurse historians, been confronted with so many confounding methodological uncertainties. The role of digital tools in historical scholarship remains under-theorised (Underwood, 2014) and under-evaluated (Koolen, van Gorp, & van Ossenbruggen, 2019). Standard source criticism questions have not been updated to reflect how nurse historians should assess digitised materials (Koolen et al., 2019). The use of analytical tools is a divisive topic (Knoblauch

& Tomes, 2014). Reports about the use of digitised sources and digital tools in narratives is at best extemporaneous (Hitchcock, 2013). And ultimately, it remains unclear if the new methods arising from the 'digital turn' haven strengthened or diluted the rigour of research outputs (Underwood, 2014).

Twenty-first century nurse historians need to probe the efficacy of the 'digital turn' (Putnam, 2016) and develop new skills to negotiate these uncharted waters (Hoekstra & Koolen, 2019). In order for nurse historians to make informed decisisons about the future direction of historical methods in nursing, it is imperative that we begin to experiment with technology. During this era of risky business, we need to reflect not only on the benefits that technology can bring to the methodology, we also need to carefully examine its challenges. By having the courage to acknowledge and openly discuss the difficulties encountered while using such tools, nurse historians have the opportunity to innovate current and future practices. The subsequent sections of this paper provide a commentary on three contemporary challenges: online searching; optical character recognition (OCR); and technology-assisted analysis, before proffering potential solutions.

3. DISCUSSION

3.1 Challenges in online searching

Mass digitisation has increased the speed of discovery (Putnam, 2016). Thanks to sophisticated algorithms, nurse historians are now able to search and locate sources without having to first know where to look (Putnam, 2016). In the past, this activity was a time-consuming and often serendipitous process of discovery where the researcher searched for the 'unknowns' by browsing the footnotes and references of secondary sources for potential leads (Given & Willson, 2018). This discovery is now a much more rapid affair accomplished by inputting keywords into a database or search engine (Hitchcock, 2013).

With this ease of discovery, however, comes new challenges that nurse historians must learn to navigate. The substantial volume of digital materials that are now available is seemlingly endless as a result of the progressive digitisation of analogue sources (e.g., newspapers, books, government records)

and the proliferation of 'digitally-born' materials including emails, e-books, e-magazines, blogs, webpages, and social media outputs (Huistra & Mellink, 2016). The proliferation of primary and secondary sources that are now readily accessed makes it easier for the historian to stumble into rabbit-holes of unrelated or inconsequential information.

These rabbit-holes often result from the messy process of online searching. A process that is further compromised by the lack of clear guidelines for how to conduct a throrough search. This lack of clarity can lead to deeper burrowing, leaving the historian questioning whether their search has been effective in capturing enough pertinent primary and secondary sources to adequately undertake their research (Huistra & Mellink, 2016). This phenomenon described as "digital dumpster diving" (due to the sheer volume of potential data available to the researcher) can severely compromise one's ability to articulate and justify their search strategy (Gailey, 2012, p. 341).

The messiness of online searching helps to explain why many historians remain reluctant to cite the retrieval details of digitised sources in their footnotes or referencing (Huistra & Mellink, 2016; Koolen et al., 2019). Prevailing stigma about the use of some online searching and reference materials (e.g., Wikipedia) as being non-research, non-academic methods may also contribute to this reluctance (Wolff, 2013). Nonetheless, the protraction of a 'don't ask, don't tell' mentality whereby nurse historians fail to disclose how digitised sources were found and used in their research is detrimental to the dependability, trustworthiness and legitimacy of historical research in nursing (Langtree, Birks & Biedermann, 2019).

3.1.1 Minimising distractions: Structuring the search

In order to address the messiness of online searching, historians need a search strategy that has structure, but is also malleable to supporting the processes of 'browsing' (Toms & O'Brien, 2008) and 'sideways glancing' (Putnam, 2016). The use of a scoping review can meet these requirements as its framework provides an overt yet iterative structure to data searching and reporting (Arksey & O'Malley, 2005). While the majority of scoping reviews performed to date have examined health-related topics, their use in health-related historical research remains under-explored.

Scoping reviews allow the researcher to quickly identify what is already known about the research topic (Arksey & O'Malley, 2005). In historical research, scoping reviews can help to navigate the searching of online databases, repositories and libraries by providing a systematic approach to the searching, screening and mapping of sources. Such structure gives the historian a sense of security in knowing that they have conducted a comprehensive search, yet it saves the historian time and energy as the opportunity to stumble into rabbit-holes that contain irrelevant materials is reduced.

Numerous frameworks exist for undertaking scoping reviews, however Arksey and O'Malley's (2005) work remains the foundation for most of these approaches. Arksey and O'Malley's (2005) framework outlines five mandatory stages for conducting a scoping review: identifying the research question, identifying relevant studies, study selection, charting the data, and collating, summarising and reporting results. Consultation is an optional sixth stage where the researcher seeks advice from experts in the field (Arksey & O'Malley, 2005). For historical research, the stages 'identifying relevant studies' and 'study selection' can be replaced with 'identifying relevant *sources*' and '*source* selection' to reflect the type of materials used in these investigations. Table 1 provides a summary of these stages.

Investing time to develop a scoping review protocol and then executing it can accelerate the data collection phase of historical research. This acceleration results from being more likely to detect flaws in the research question or study design during the protocol development stage. Potential issues that may be detected during this stage include poorly-constructed search terms, source access problems, the need to translate sources that are written in foreign languages, and OCR difficulties. By detecting these issues early on, nurse historians can then implement pre-emptive strategies to address them. The application of the pre-determined eligiblity criteria also speeds up the screening of sources as document triaging - the process where the historian screens all query-related materials in order to locate and save relevant sources for later analysis - becomes more efficient (Given & Willson, 2018). The use of a scoping review can also hasten the revision of search strategies and outcomes as each stage of the search process is clearly documented. Not only does this accelerate the historian's ability to review how a source was located and used in the study, it also improves the dependablity of the study as an audit trail is produced (Langtree et al., 2019).

3.1.2 Maximising returns: Refining the search query

The rabbit-holes encountered during online searching can be limited by taking the time to carefully craft and refine search terms prior to their use. When developing the search terms, nurse historians need to first identify the key concepts of the area of study. From here, they can list alternative spellings for each identified term, such as the subtle differences in spelling between British and American English (e.g., haemorrhage vs. hemorrhage) and the somewhat ad-hoc application of hyphenisation in English (e.g., bloodletting vs. blood-letting vs. blood letting). Synonyms that can be used as an alternative to the search term should also be added to the search string to improve the representativeness of results (Huistra & Mellink, 2016). Using the previous example, bloodletting is also known as venesection or phlebotomy. It is also worthwhile to consider any closely-related applications of the search term. In this example, related procedures such as leeching (also referred to as leech application and leech therapy) and wet cupping (or wet-cupping) should be added to the search string.

Once the list of alternative terms is articulated, the nurse historian can build a search query using the Boolean operator of 'OR' (Huistra & Mellink, 2016). Using the example described above, the search query would be: 'bloodletting' OR 'blood letting' OR 'blood-letting' OR 'venesection' OR 'phlebotomy' OR 'leeching' OR 'leech application' OR 'leech therapy' OR 'wet cupping' OR 'wet-cupping'. This process can then be repeated for each remaining key concept found in the research question (e.g., the target group, time period and event being studied). Following the construction of each search string, the sets can be pooled with the Boolean operator of 'AND' to create a combined search query (Huistra & Mellink, 2016).

When undertaking online searching, semantic nuances in language use must be considered. This includes recognising the intranational, transnational or cultural differences in word use and meaning that exist within a common language. Nurse historians must also be cognisant of the temporal nuances of language use (Thompson et al., 2016). One example of how a word's meaning has changed over time is the term apoplexy. Apoplexy is derived from the ancient Greek term apoplexia meaning 'to strike suddenly' or 'be struck down violently' (Engelhardt, 2017). Until the Modern era, apoplexy was an

umbrella term used to describe a number of neurological disorders where a sudden loss of consciousness was experienced. As autopsies became more prevalent in the 17th century, apoplexy was successively used to solely describe a stroke and is now rarely used in contemporary medicine (Engelhardt, 2017).

3.2 Challenges with using OCR on digitised sources

Digitisation has transformed how historical sources are read and analysed. The majority of these changes are due to the advent and use of OCR software. OCR allows analogue text to be converted into machine-readable data. This process facilitates many features of online searching, and the ability to perform keyword searching on full text documents (Hitchcock, 2013). It is also used in more sophisticated analytical tools such as text mining (TM) (Thompson et al., 2016) and network analysis (Anderson et al., 2017). OCR converts a scanned image of printed pages into alphanumeric characters by detecting the pixel patterns within the image (Blanke, Bryant, & Hedges, 2012).

Problems with the OCR of historical sources occur for numerous reasons. OCR tools are challenged by source degradation as a result of age and poor preservation practices, the presence of artefacts (e.g., dirt, the typeface of the back sheet bleeding through) and the non-standard layouts of sources (e.g., differing kerning - the spacing between letters; variable leading - the distances between lines) (Blanke et al., 2012). OCR tools also have difficulty recognising non-uniform or highly stylised characters. Therefore, sources that are handwritten or are printed using Early Modern typefaces such as Gothic scripts are particularly prone to OCR inaccuracies (Hitchcock, 2013). The presence of archaic allographs can also confuse OCR. Examples of allographs include the letter 'v' that was used to represent both 'u' and 'v' and the long 's' - ſ - being mistaken for the letter 'f') (Fig. 1).

3.2.1 Minimising misinterpretation: Improving OCR

While several pre-processing steps (e.g. binarisation, denoising, de-skewing) can be taken to improve the accuracy of OCR and readability of historical documents, most historians lack the knowledge and skillset to manually 'clean' a source (Blanke et al., 2012). Hence, when a source is plagued with OCR

inaccuracies, a historian is often left with no other option but to return to hand-searching for key evidence. The employment of several workarounds to improve the accuracy of OCR with archaic sources can reduce the need for hand-searching.

The first strategy is enhancing the scanned image by adjusting the document properties within the PDF. Some programs such as Adobe Acrobat Pro DC feature an 'Enhance Scan' function allowing the historian to select a range of automated 'cleaning' tools such as de-skewing, text sharpening and background removal (used to remove the page pigmentation and contrast to improve text readability) (Fig. 2). Another useful feature that is available in this program is the 'Recognise Text' function. This feature enables the identification and correction of any OCR suspects - areas of text that are unreadable or questioned by the OCR tool.

In cases where the OCR tool does not have an in-built image optimisation, nurse historians can try to manually adjust the settings of the PDF to improve OCR. Manual adjustments that improve the OCR of a source incude checking the image resolution of the PDF is set to 300 dots per inch (dpi) (Blanke et al., 2012; Cristianini et al., 2018); or for smaller fonts of less than 10 points, the resolution should be adjusted to between 400 and 600 dpi (Abbyy Technology Portal, 2017). Where possible, the colour scheme of the source should be adjusted to mimic binarisation (i.e., black text with a white background) so that the text becomes easier to recognise (Fig. 3) (Blanke et al., 2012). Before running OCR on a foreign language source, the historian should also check and adjust the default language setting of the tool to ensure OCR is optimised (Cristianini et al., 2018).

In cases where OCR remains suboptimal, full text searching within the document can be accomplished through using a 'stemming' approach. 'Stemming' is a search method where only the stable stem of a word is searched rather than the entire word (Cristianini et al., 2018). For instance, the stem 'nurs' would locate words such as nursing, nurse and nurses. This approach reduces the orthographic variation of words and is particularly useful when spelling is non-standardised across countries (e.g., the differences between British and American English) or when the language is highly inflected (e.g., Italian and Spanish) (Reffle & Ringlstetter, 2013). While not ideal, 'stemming' enhances the historian's ability to promptly review and triage potential sources.

3.3 Challenges with technology-assisted data analysis

The advent of macroscopic analytical tools such as TM and network analysis has transformed the way in which we *can* conduct historical research. Nonetheless, the use of such tools also creates a new set of challenges for the nurse historian who is inexperienced with using such software. The pressure to appear technologically-competent in the 'digital age' can result in some nurse historians being tempted to use an off-the-shelf analytical tool. For example, they could use an open-access tool such as Voyant Tools or Bookworm to identify key concepts within a corpus by reviewing word frequencies and usage patterns (Anderson et al., 2017). While mainstream tools are often user-friendly, they have the potential to produce unreliable results because of the way in which their artificial intelligence is generated (Cristianini et al., 2018). Many of these tools learn how to recognise different patterns and characteristics within multiple corpora using only contemporary materials (Thompson et al., 2016). Therefore, they may be unable to discern the temporal and semantic nuances of archaic language use, resulting in a misguided analysis.

Analytical mistakes can also occur if a tool applies the contemporary meaning of some words to older documents as the modern interpretation may be completely different to its original intent (Thompson et al., 2016). The interpretation of the word *crumpet* is a classic example: in contemporary lexicon, crumpet refers to an air-filled pastry, whereas this word was once used to denote a person's head. Analysis gaps may also result as some content is literally lost in translation. This predicament can occur if the tool is unable to identify a word (e.g., the word *aliment* - comparable to food - has essentially disappeared from today's lexicon); cannot account for changes in word spelling (e.g., the archaic spelling of *show* was *shew*); or the word's meaning is the complete opposite of its archaic intention (e.g., *bully* used to mean 'sweetheart'). The risk of producing an inaccurate or indecipherable analysis means mainstream tools should be used cautiously with older sources.

3.3.1 Maximising context: Using CAQDAS to aid analysis

Adopting a hybrid approach to analysis can assist nurse historians to avoid the potential pitfalls of using macroscopic analysis tools while also enhancing the rigour of the study and its findings. This blending of traditional and nascent methods can be readily achieved through the use of a computer-assisted qualitative data analysis software (CAQDAS) program such as NVivo or ATLAS.ti. CAQDAS programs enable a blended reading approach to historical analysis as close reading (i.e., micro analysis) is combined with more advanced analytical tools (i.e., macro analysis) such as network analytical modelling. Despite CAQDAS being widely-used in other areas of qualitative research, their use in historical methods has received little attention.

Importantly, CAQDAS support the continuation of traditional historical methods such as close reading and source criticism but improves the auditability of these methods. For example, during close reading stage, annotations can be made directly onto the PDF of the digitised source or they can be added as a separate memo. The memo can then be directly linked to the source or any other file in the project using the program's linking feature (e.g., in NVivo, the 'See Also Link' or 'Memo Link' functions could be used). The use of such features serve as an effective way to jog one's memory at a later date as the created link will take the user straight back to the supplemental information. The use of such features can improve the efficiency and rigour of the analysis as the cross-checking of information is more straightforward and transparent than the handwritten prompts that are commonly used in traditional historical analysis.

The nurse historian's understanding of the research topic can also be improved through using the coding feature of the CAQDAS (Tummons, 2014). Coding, the process of assigning labels to different sections of text, enables the exploration of textual information by determining patterns within a corpus (Saldana, 2016). The use of CAQDAS allows nurse historians to concurrently code while performing close reading. Examples of how codes can be used with historical sources include denoting: a contextual aspect of the source (e.g., epoch), a bibliographical aspect of a source (e.g., author), or a key figure, concept, or other area of interest that is evident in the source (Saldana, 2016). This type of coding permits a range of different phenomena to be subsequently explored across the corpus (Tummons, 2014). These

codes can then be reviewed, revised or collapsed into larger themes or categories as the analysis progresses, reflecting the iterative process that normally occurs during traditional historical analysis. Through coding the corpus, a systematic method to the historical analysis becomes evident – it creates a log of discovery that the nurse historian and others can use to follow the logic behind the analysis (Hoekstra & Koolen, 2019).

Most CAQDAS programs also have the ability to perform a number of distant reading analytics such as generating cluster analysis diagrams or concept maps. Normally, the researcher's coding is used to generate these visual representations rather than text recognition, therefore the accuracy of these visualisations remains uninfluenced by poor OCR or digitisation practices. A CAQDAS-generated visual model can highlight trends within the analysis that either confirm or refute the historian's preliminary inferences (Hoekstra & Koolen, 2019). Alternatively, viewing the coded data as a model may reveal gaps in the analysis or areas that need further investigation such as revealing an unexpected connection between two key figures. Such visual representations therefore act as a mediator between the corpus content and the nurse historian – helping them to develop a rich mental model and consider phenomena from multiple perspectives. This mental modelling is an essential component in historical contextualisation (Baron, 2016).

While the use of CAQDAS in historical methods is nascent, the potential benefits of their use – improving the transparency of analysis by documenting the historian's thought processes; enabling the prompt cross-checking of information; permitting the testing of inferences; and reducing the risk of decontextualisation – offer valid reasons for why CAQDAS programs can have a place in contemporary historical methods.

4. CONCLUSION

The 'digital age' has transformed how nursing historical research is now conducted. Now, the nurse historian is able complete large (if not all) amounts of their research online – resulting in a broadened scope of potential sources and research topics. With these expanded opportunities, nurse historians face

new challenges when performing historical research. As the end-users of such technologies, it is imperative that nurse historians be at the forefront for determining how these tools are adopted and used in the future. In the meantime, strategies such as conducting a scoping review, refining search queries, improving OCR or using a CAQDAS program can assist in navigating the present challenges faced in historical methods. Through implementing such strategies, nurse historians are best positioned to navigate the risky business of digital historical research by demonstrating the way in which technologies are used is controlled by the *user*, rather than the technology *itself*.

Disclosures

The authors declare they have no competing interests.

Ethical statement

An ethical statement is not appplicable for this manuscript.

Conflict of interest

None.

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Table 1

Summary of stages for conducting a scoping review for historical research

Stage	Features and Characteristics
Identifying the research question	• Guides how the search and analysis will be conducted • Needs to be broad enough to summarise the breadth of evidence (e.g., What is known about…?) • Consideration points (e.g., place, event, time period, individual/group being studied) • Develop working definitions for each element of research question • Further refinements are made once historian gains a sense of the volume and contents of the text corpus

Identifying relevant sources	• Development of a broad search strategy including planning for how sources will be managed and screened
	• Articulates which digital platforms will be used for searching (databases, online repositories/collections and webpages)
	• Development of search terms (e.g., key words, synonyms and variants; spelling variations; application of Boolean operators)
	• Development of eligibility criteria that will be used in future screening:
	  ○ Types of sources included in study (e.g., Will discursive primary sources such as letters or journal entries be included?; How will secondary sources be used in the analysis?)
	  ○ Temporo-spatial considerations (e.g., applying filters to capture time- or geographic-specific materials)
	  ○ Language restrictions (e.g., Will foreign language sources be included?)

Source selection	• Sources are screened using pre-determined eligibility criteria • Hand-searching of secondary sources to locate additional primary sources • Source criticism undertaken • Digitised copies of primary and secondary sources are stored in a reference management system (e.g., EndNote or RefWorks) • Consider using an independent reviewer for sources where there are queries about its eligibility or authenticity
Charting the data	• Data is presented as a spreadsheet or table including:

	○ Bibliographical details (metadata) from eligible sources (title, source type, author, publication details - year, location, publisher, edition; language; archival details - repository and retrieval URL) ○ Purpose and target audience • Optional details include the physical features (dependent on the scope of study): ○ Front matter inclusions (dedications, acknowledgements, endorsements, prologue, table of contents) ○ Organisational layout (number of pages, indexing, appendices, addendums) ○ Typographical aspects (style – handwritten or typeset, use of drop caps, orthographic features, presence of typographical errors) ○ Other features (e.g., material, illustrations, handwritten annotations, source condition)
Collating, summarising and reporting	• Equates to analysis, interpretation and dissemination
Consultation (optional)	• Seeking help to locate a source; translating a source; or clarifying an interpretation of the source

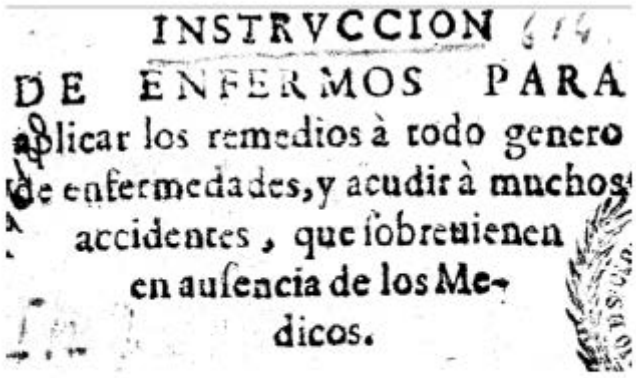
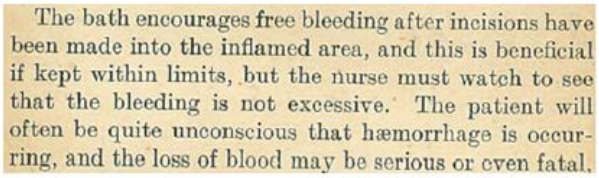


Fig. 1. Example of allographs found in this book title. Source: Fernandez, A. (1680). *Instruccion de Enfermos* (sic) [*Instructions for Nurses]* (4th ed.). Madrid, Spain: Roque Rico de Miranda.

a. 300 dpi


The bath encourages free bleeding after incisions have been made into the inflamed area, and this is beneficial if kept within limits, but the nurse must watch to see that the bleeding is not excessive. The patient will often be quite unconscious that hæmorrhage is occurring, and the loss of blood may be serious or even fatal.

b. 300 dpi with text sharpening

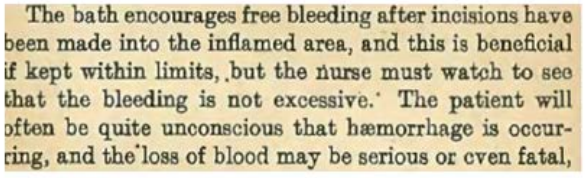

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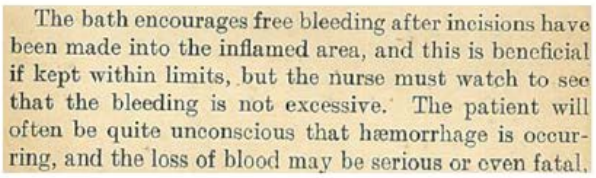
Fig. 2. Enhancing OCR of digitised source: (a) Scanned source at 300 dpi; (b) Using text sharpening feature of Adobe Acrobat Pro DC. Source: Howard, R. (1915). *Surgical nursing and the principles of surgery for nurse* (2nd ed.). London, England: Edward Arnold.

a. 300 dpi


The bath encourages free bleeding after incisions have been made into the inflamed area, and this is beneficial if kept within limits, but the nurse must watch to see that the bleeding is not excessive. The patient will often be quite unconscious that hæmorrhage is occurring, and the loss of blood may be serious or even fatal.

b. 600 dpi with binarisation

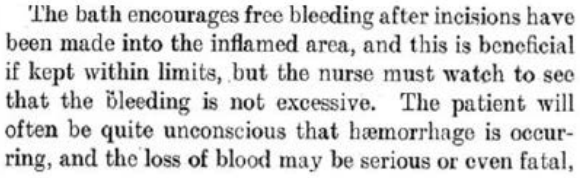

The bath encourages free bleeding after incisions have been made into the inflamed area, and this is beneficial if kept within limits, but the nurse must watch to see that the bleeding is not excessive. The patient will often be quite unconscious that hæmorrhage is occurring, and the loss of blood may be serious or even fatal,

Fig. 3. Enhancing OCR of digitised source by increasing resolution and binarisation: (a) Scanned source at 300 dpi; (b) Increasing the resolution to 600 dpi and text binarisation. Source: Howard, R. (1915). *Surgical nursing and the principles of surgery for nurse* (2nd ed.) London, England: Edward Arnold.

4.8 Ethical considerations

Ethics are considered an integral component of research irrespective of the topic or type of research that is being conducted (Braun & Clarke, 2013). In historical research, the researcher must engage in ethical decision-making at each stage of the research process to minimise the inherent risk of misrepresenting information found within historical sources or shared by participants in oral histories (Lewenson & Krohn Herrmann, 2008). To reduce the risk of misinterpretation due to unethical conduct, two key documents were utilised: the 'National Statement on Ethical Conduct in Human Research' (National Health and Medical Research Council [NMHRC], Australian Research Council, & Universities Australia, 2018) and the 'Ethical Guidelines for the Nurse Historian' (Birnbach, Brown, Hiestand, 1993, as cited in Birnbach, 2008).

Despite human research not being conducted in this study, the National Statement on Ethical Conduct in Human Research (NMHRC et al., 2018) was consulted to guide decisions regarding the research scope, aims and methods and data management (including data storage). In addition, a risk management plan was also formulated (see Appendix C). An exemption was also sought from the JCU Human Research Ethics Committee to ensure compliance in the reporting of this requirement. This exemption was approved by the Chair of the JCU Human Research Ethics Committee on 26 March 2018 (see Appendix D).

The Ethical Guidelines for the Nurse Historian (1993)—written for the American Association for the History of Nursing—provided specialised advice on the ethical conduct for historical research. These guidelines identified five key areas in which a nurse historian must consciously employ ethics (Birnbach et al., 1993, as cited in Birnbach, 2008, pp. 171–172):

- the historian's relationship to sources (e.g., supporting accessibility to sources and the historian's responsibility to report accurate information found within the sources)

- the historian's relationship to subjects (participants) (e.g., presenting historical truths and obtaining a participant's informed consent
- the historian's relationship with colleagues/students (e.g., knowledge sharing and recognising the work of others)
- the historian's relationship with the community (e.g., advocating to protect historical sources and promoting greater public awareness for the role of history)
- the ethical canons of conduct in historical inquiry (e.g., avoiding plagiarism, 'falsely injuring the reputation of others' and destroying or removing sources and artefacts).

These guidelines assisted me to remain true to the data by being conscious of my biases and assumptions on early nursing praxis (Lewenson & Krohn Herrmann, 2008, p. 176). These guidelines also assisted in making informed judgements about my interpretation—I recognised that historicising the past will always contain a degree of subjectivity (Donnelly & Norton, 2011). To address this potential methodological weakness, I decided to be as overt with my data collection, analysis and interpretation as possible. This is evidenced by using the scoping review protocol, translation protocol and my approach to thematic analysis.

4.9 Summary

In this chapter, the study design and methods used for collecting, collating, translating and analysing the sources were explained. The study design consisted of four phases: (1) developing the scoping review protocol, (2) implementing the scoping review, (3) analysis and interpretation and (4) dissemination. The methods outlined in this chapter provide an example as to how traditional historical methods can blend with emerging digital methods and technologies. The outcomes of the scoping review and the annotated bibliography of the corpus are presented in the next chapter.

Chapter 5: Findings 1—Scoping Review Results

Dear Sir or Madam, will you read my book?

It took me years to write, will you take a look?

Lennon & McCartney, 1966/2009, track 24

5.1 Introduction

Chapter 4 discussed the methods used in this study and the scoping review protocol. This chapter is the first findings chapter and reports on the outcomes of the scoping review. These findings map the progression of nursing theory and praxis between the sixteenth and mid-nineteenth centuries. The chapter commences with an overview of the search results and presents a synopsis of each identified primary source.

5.2 Search Results

The search was conducted in March 2019 as per the scoping review protocol presented in Chapter 4. Primary sources were located using two different search strategies: database searching and repository and webpage searching (see Appendix A). Modifications to the original protocol were made, specifically:

- The database Project MUSE was not able to be searched because its subscription was ceased by the university on 31 December 2018.
- JStor searching was limited to the first three search strategies (‘rare books’ AND ‘nursing’; ‘history of nursing’ AND ‘rare books’; ‘history of medicine’ AND ‘rare books’) because the other planned search strategies (e.g., ‘nursing’ and ‘fifteenth century’) returned a majority of non-nursing articles.
- The eligibility criteria were amended to exclude manuscripts that focused on wet nursing or infant care and mental health nursing.

Four databases were searched (CINAHL, JSTOR, MEDLINE and Scopus), yielding 3,539 potential secondary sources. After the removal of duplicates and screening of title and abstracts of the potential secondary sources against the eligibility criteria, 169 articles were retrieved in full. Each article was reviewed to identify if the author(s) referred to any pre-1860 primary sources about nursing practice. A hand-search of these articles revealed that 22 contained references to 36 primary sources that detailed nursing care prior to the publication of *Notes on Nursing*. The titles of these primary sources, found via database searches, are presented in Table 5.1.

Table 5.1: Pre-1860 primary sources found in secondary sources via database search

Country of origin	Short title of primary source
Austria	*Unterricht für Krankenwärter* (*Lessons for Nurses*, 1831)
England	*General Rules and Regulations for the Governance of Patients and Nurses* (1664)*
	*Eastern Hospitals and English Nurses: The Narrative of Twelve Months' Experience in the H*ospitals *of Koulali and Scutari* (1856)
	Subsidiary Notes as to the Introduction of Female Nursing into Military Hospitals in Peace and War (1858)
	Notes on Hospitals (1859)
France	*Pharmacopee Universelle* (*Universal Pharmacopoeia*, 1729)
	Manuel Pour le Service des Malades (Manual for the Service of the Sick, 1786)
	Manuel de Garde-malade, des Garde des Femmes en Couche et des Enfans au Berceau (*Manual for Nurses, Midwifes and Care of Infants*, 1815)
	Manuel Theorique et Pratique des Gardes-malades et des Personnes qui Veulent se Soigner Ells-memes, ou L'ami de la Sante (*Theoretical and Practical Manual of the Nurses and People Who Want to Heal Themselves, or the Friend of Health*,1824)

Databases searched were CINAHL, JSTOR, MEDLINE and Scopus. Search conducted in March 2019.

*Unable to obtain a digitised copy of the source.

Country of origin	Short title of primary source
France (cont)	*La Garde-malades Domestique* (*The Domestic Nurse*, 1829)*
	Manuel de Medecine et de Chirurgie a L'usage des Soeurs Hospitalieres (*Manual of Medicine and Surgery for the Use of Hospital Sisters*, 1836)
	Le Guide Medical des Gardes-malades, des Cures, des Dames de Charite (*The Medical Guide of the Nurses, Curers, [and] Ladies of Charity*,1838)
	Guide Aupres des Malades, ou Precis de Connaissances Necessaires aux Personnes qui se Devouent a leur Soulagement…avec des Details qui Concernent les Soins des Gardes-malades (*A Guide for the Sick, or for the Necessary Knowledge of the People who are Devoted to their Relief … with Details Concerning the Care of the Nurses*, 1843)*
	Le Livre des Garde-malades—Instructions sur les Soins a Donner aux Maladies et la Meilleure Mamere D'executer les Ordonnances du Medecin (The Nursing Book—Instructions on how to Care for Diseases and the Best Woman to Perform the Doctor's Prescriptions, 1846/1858)
	Manuel de la Garde-malade ou Methode Facile de Soigner les Maladies (*Manual of the Nurse or Easy Method of Caring for the Sick*, 1858)*
Germany	*Unterricht für Krankenwärter zum Gebrauch Öffentlicher Vorlesungen (Teaching for Nurses for the Use of Public Lectures, 1784)*
	Anleitung zur Krankenwartung (*Instructions for Nursing Care*, 1832)
	Anleitung zur Krankenwartung (*Instructions for Nursing Care*, 1837, different author)
Portugal	*Luz da Medicina Prática Racional e Metódica: Guia de Enfermeyros*, *Directório de Principiante (Light of Practical and Rational Methodical Medicine: A Guide for Nurses, Directory for Beginners, nine editions released between 1664 and 1753)*
	Postilla Religiosa e Arte de Enfermeiros (*Religious Charts and the Art of Nursing*, 1741)*

Databases searched were CINAHL, JSTOR, MEDLINE and Scopus. Search conducted in March 2019.

*Unable to obtain a digitised copy of the source.

Country of origin	Short title of primary source
Spain	*Libro del Arte de las Comadres o Madrinas y Regimiento de las Preñadas y Paridas y de Los Niños* (*Book of the Art of Midwife and Support Woman and the Rules for Pregnancy, Birth and Care of the Infant*, 1541)
	Historia de la Vida y Sanctas Obras de Juan de Dios (History of the Life and Holy Works of John of God, 1585)
	Constituciones del Gran Hospital Real de Santiago de Galicia (Constitutions of the Great Royal Hospital of Santiago de Galicia, 1524)
	Constituciones del Hospital Real de Santiago de Galicia (*Constitutions of the Royal Hospital of Santiago, Galicia*, 1594)
	Estatutos y Constituciones del Hospital del Espíritu Santo de Sevilla (*Statutes and Constitutions of the Hospital of the Holy Spirit of Seville*, 1590)*
	The five editions of *Instruccion de Enfermeros* (*Instructions for Nurses*, 1617–1728)
	Practica de Boticarios, Guía de Enfermeros, Remedios para Pobres (*Practice of Apothecaries, Guides of Nurses, Remedies for the Poor*,1634)
	Constituciones y Regla de la Minima Congregacion de los Hermanos Enfermeros Pobres (*Constitutions and Rules of the Congregation of the Brothers Minima Poor Nurses* [The Obregonians], 1634)
	Directorio de Enfermeros (*Directory for Nurses*, 1651, 1668)*
	Chapters 2 and 18 in the orders section of *Constituciones, y Ordenanzas, para el Gobierno de los Reales Hospitales General, y de la Passion de Madrid* (*Constitutions and Orders for the Government of the General Hospital of Madrid and Hospital of Passion, Madrid*, 1760)
	Chapters 18 and 20: Senior nurses and their obligations; Chapters 26 and 28: minor nurses' obligations in *Constituciones para el Regimen y Gobierno del Hospital Real de la Ciudad de Santiago, y Administración, Cuenta y Razón de sus Bienes y Rentas* (*Constitutions for the Regime and Government of the Royal Hospital of Santiago and Administration, an Account of their Assets and Income,* 1804)

Databases searched were CINAHL, JSTOR, MEDLINE and Scopus. Search conducted in March 2019.

*Unable to obtain a digitised copy of the source.

Country of origin	Title of primary source
The Netherlands	*Instructions Pour les Personnes qui Gardent les Malades (Instructions for People who keep the Sick,* 1777, 1778)
United States	*The Family Nurse: Or, Companion of the Frugal Housewife* (1837) *Instructions on the Care of the Sick* (1841)* *Miss Beecher's Domestic Receipt Book* (1846) *Advices Concerning the Sick* (1847)*

Databases searched were CINAHL, JSTOR, MEDLINE and Scopus. Search conducted in March 2019.

* Unable to obtain a digitised copy of source

Digitised copies of the primary sources were sourced for 27 manuscripts. A further 10 digitised copies of books were located via the online depositories and webpages listed in the protocol. These are presented in Table 5.2.

Table 5.2: Digitised primary sources located from online repositories and webpages

Country of origin	Title of primary source
Canada	*A Medical Essay, or the Nurse and Family Physician* (1849)
England	*The Good Nurse; or, Hints on the Management of the Sick and Lying-in Chamber, and the Nursery* (1825)
	*On the Education of Nurses: An Address to the Subscribers and Friends of the Lying-in Hospital, Birmingham (*1846)
	The Training Institutions for Nurses and Workhouses: An Attempt to Solve One of the Social Problems of the Present Day (1849)
	Facts Relating to Hospital Nurses, In Reply to the Letter of 'One Who has Walked a Good Many Hospitals,' Printed in The Times of 13th April last: Also, Observations on Training Establishments for Hospital and Private Nurses (1857)
Germany	*Anleitung zur Allgemeinen Krankenpflege: Ein Handbuch für Krankenwärter* (*Guide to General Nursing: A Handbook for Nurses*, 1809)
	Die Kunst, den Kranken zu Pflegen (*The Art of Caring for the Sick,* 1832)
Spain	*Recetario Medicinal Espagírico* (*Spagyric Medicinal Recipes,* 1713/1734)
United States	*The Nurses Guide, and Family Assistant; or Companion for a Sick Chamber* (1819)
	The Principles and Practice of Nursing, or A Guide for the Inexperienced (1842)

Contacting historians also generated another potential text, Elizabeth Fry's (1827) *Observations on the Visiting, Superintendence and Government of Female Prisoners*. This book was excluded from the study because it did not meet the inclusion criteria.

After the review of the remaining manuscripts' titles and front matter, a further 13 books were removed because they did not fulfil the eligibility criteria:

- *A Medical Essay*, *or the Nurse and Family Physician*—focused on medical care despite its preface indicating that 'nursing, which is believed, in many cases, to be of more importance than even medicine itself' (Philanthropos Physician, 1849, p. iv)
- *Eastern Hospitals and English Nurses*—content focused primarily on the author's experiences in the Crimea as opposed to nursing care
- *Historia de la Vida y Sanctas Obras de Juan de Dios, y de la Institución de su Orden, y Principio de su Hospital*—focused primarily on the life of Saint John of God as opposed to nursing
- *Le Guide Medical des Gardes-malades, des Cures, des Dames de Charite*—primarily discussed aspects of general health and first aid for lay caregivers
- *Le Livre des Garde-malades—Instructions sur les Soins a Donner aux Maladies et la Meilleure Mamere D'executer les Ordonnances du Medecin*—described home nursing cares and first aid
- *Libro del Arte de las Comadres o Madrinas y Regimiento de las Preñadas y Paridas y de Los Niño*—focused on midwifery care
- *Manuel Theorique et Pratique des Gardes-malades et des Personnes qui Veulent se Soigner Ells-memes, ou L'ami de la Sante*—discussed care of the sick by lay caregivers
- *Miss Beecher's Domestic Receipt Book*—contained a small, superficial section on recipes and care of the sick; no references to nursing were made
- *Notes on Hospitals*—focused primarily on the structural organisation of hospitals
- *Pharmacopee Universelle*—was a pharmacopeia
- *Practica de Boticarios, Guía de Enfermeros, Remedios para Pobres*—was a medicinal recipe text

- *Rectario Medicinal Espagirico*—was a medical receipt text
- *The Family Nurse*—discussed care of the sick by female relatives.

Source criticism was undertaken for each remaining manuscript. No concerns about authenticity and accuracy were noted, most likely because most of these sources are archived in reputable institutions, such as university libraries. A total of 24 digitised primary sources were included in this review (see Figure 5.1).

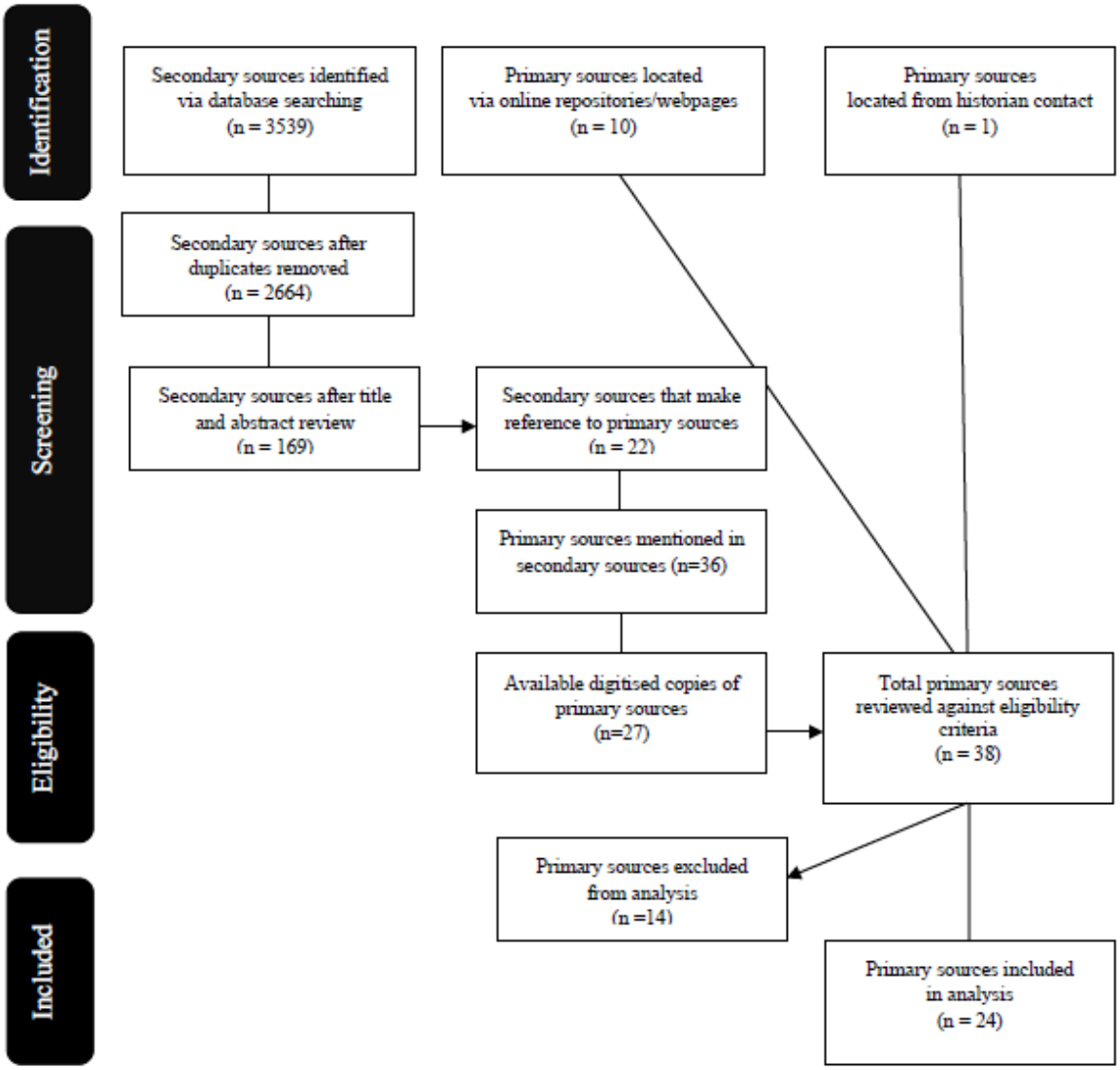


Figure 5.1: Flow diagram summarising search outcomes

5.3 Corpus Overview

The corpus consisted of 24 sources produced between 1524 and 1858. Table 5.3 compares the corpus demographics with regard to the language in which the book was written and the country where the book was first published. While most books were published in the early nineteenth century (n = 15), the only sixteenth- and seventeenth-century sources included in the corpus were Spanish manuscripts (n = 4; see Table 5.4). Table 5.5 summarises corpus authors' primary

occupations. Most manuscripts included in this corpus were written by medical doctors (n = 17).

Table 5.3: Corpus demographics: Language and country where source originally published

Language	Country of publication	Number of books
English	England	5
	US	2
French	France	3
	The Netherlands	1
German	Austria	1
	Germany (Prussia)	5
Spanish	Spain	6
Portuguese	Portugal	1
Total		**24**

Table 5.4: Corpus demographics: Comparison of century when published and written language

Language	16th Century	17th Century	18th Century	19th Century
English	0	0	0	7
French	0	0	2	2
German	0	0	1	5
Spanish	2	2	1	1
Portuguese	0	0	1	0
Total	**2**	**2**	**5**	**15**

Table 5.5: Corpus demographics: Primary occupation of corpus authors

Language(s)	Number of books
Doctor	17[a]

Nurse	2
Administrator[b]	3
Unknown	2
Total	**24**

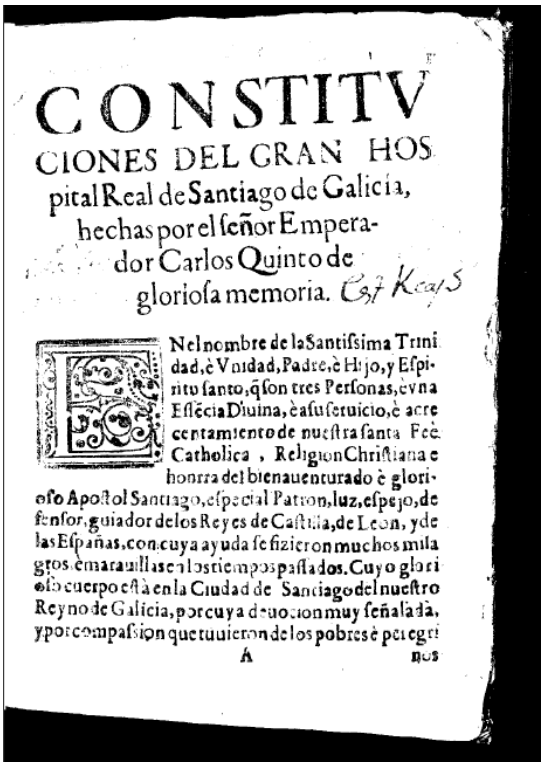
[a] Includes one anonymous author who is identified as a doctor in the book's preface; [b] includes religious and hospital administrators.

An annotated biography of each source is presented chronologically with the exception of the treatise, *Instruccion de Enfermeros,* which was examined in Chapter 2.[39]

[39] It is acknowledged that annotated bibliographies are normally presented in alphabetical order. However, I decided to arrange the source summaries chronologically to better contextualise the core concepts discussed in each source.

5.4 Sixteenth-century Manuscripts

Anonymous. (1524). *Constituciones del Gran Hospital Real de Santiago de Galicia hechas por el Señor Emperador Carlos Quinto* [Constitutions of the Great Royal Hospital of Santiago, Galicia made by Emperor Charles V of glorious memory]. Valladolid, Spain: S. n. Retrieved from https://minerva.usc.es/xmlui/bitstream/handle/10347/7131/b11165704.pdf?sequence=1&isAllowed=y



CONSTITV
CIONES DEL GRAN HOS
pital Real de Santiago de Galicia,
hechas por el señor Empera-
dor Carlos Quinto de
glorioſa memoria.

En el nombre de la Santiſsima Trini
dad, è Vnidad, Padre, è Hijo, y Eſpi-
ritu ſanto, q̃ ſon tres Perſonas, è vna
Eſſẽcia Diuina, è a ſu ſeruicio, è acre
centamiento de nueſtra ſanta Fee
Catholica, Religion Chriſtiana e
honrra del bienauenturado è glori-
oſo Apoſtol Santiago, eſpecial Patron, luz, eſpejo, de
fenſor, guiador de los Reyes de Caſtilla, de Leon, y de
las Eſpañas, con cuya ayuda ſe fizieron muchos mila
gros è marauillas en los ſtiempos paſſados. Cuyo glori
oſo cuerpo eſtà en la Ciudad de Santiago del nueſtro
Reyno de Galicia, por cuya deuocion muy ſeñalada,
y por compaſsion que tuuieron de los pobres è peregri
A nos

Figure 5.2: Front page of *Constituciones del Gran Hospital Real de Santiago* (1524)

This 73-page manuscript details the *Constituciones (Constitutions)* for the governance of the Royal Hospital of Santiago.[40] The *Constituciones* was possibly written by Francisco de los Cobos, the royal secretary and comendador for Castile.[41] The hospital, like other medieval

[40] Santiago de Compostela is located Galicia, north-western Spain. The town's cathedral houses the shrine of the apostle Saint James the Great and has attracted pilgrims since the Middle Ages. The hospital, also known as the Hospital of the Catholic Kings, was erected at the beginning of the sixteenth century using proceeds from the Reconquest in 1492. It was built to accommodate and provide medical care to locals and pilgrims.

[41] Three factors have led to this assumption: 1) The title indicates it was written by Charles V; 2) the final page is signed 'by the king' immediately followed by Cobos's name and position; 3) the language used is authoritative—'I order' is used frequently throughout this edition; and 4) the role of the *protomedico* (the chief medical officer) was reintroduced in 1523—one year prior to the *Constitutions* being published by Charles V, who recognised a was need to improve and protect the health of his citizens to strengthen his Empire (Clouse, 2016). The term *protomedico* was first used in the thirteenth century by Aragonese kings, signifying 'first among physicians'

European hospitals, offered a range of services, including spiritual and physical care for the sick and hospitality to pilgrims. A description of these services is outlined in the manuscript, including special instructions for the timing of mass and how to lay to rest deceased pilgrims. The manuscript also supplies position descriptions for key positions in the hospital, including doctors, the surgeon, the barber, the gardener and the *Enfermero Mayor*, the (male) senior nurse.

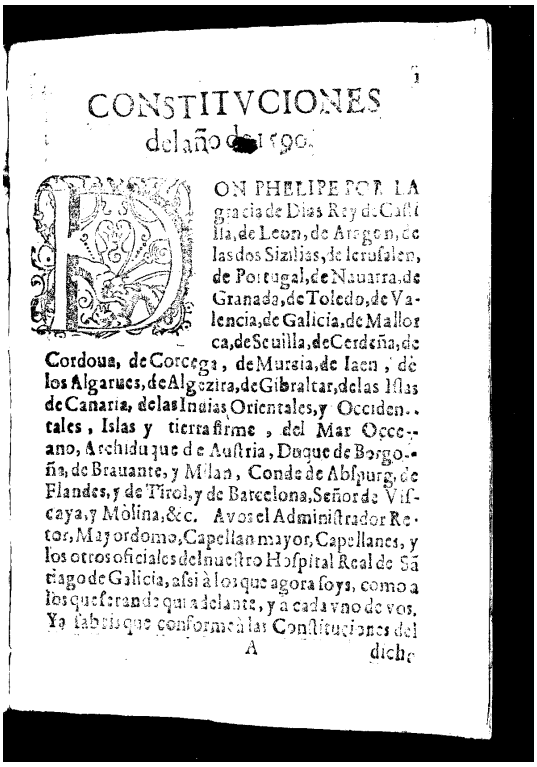
The *Constituciones* indicates that the senior nurse was a paid position and the incumbent would be sane, authoritative and conscientious. Acting with integrity was an essential requirement for this role, as demonstrated by the senior nurse declaring that they would refrain from being deceitful or fraudulent while in that position at the commencement of employment. The senior nurse's duties included overseeing the work of junior nurses, ensuring patients received remedies and diets as ordered by medical staff, making beds, assisting with direct patient care (e.g., administration of purgatives and monitoring the 'bleeding' patient), overseeing consumables and alerting the hospital's chaplains of dying patients so that the last rites could be given. Guidance for how the senior nurse should reprimand negligent nurse behaviour was also provided in this *Constituciones*. In such a case, the first occasion of misconduct resulted in a one-quarter reduction in the nurse's salary; a second offence resulted in the halving of the nurse's salary; and a third offence ended with their dismissal (p. 41). Despite the author indicating the use of junior nurses within the hospital, a discrete overview of their role could not be found in this manuscript.

Similarly omitted are summaries of the roles and responsibilities of female nursing staff who cared for the hospital's female patients. While it is ordered that females must be cared for by a group of female nurses who were experienced in that 'which we do not know' (p. 42), there was no clear description of their reporting structure, core duties or collaboration with other

(Clouse, 2016, p. 15). Unfortunately, the digitisation of this manuscript is poor, making some pages (including p. 73) difficult to read.

staff. Such lack of detail suggests childbirth and women's health were very much a hidden business. Nonetheless, this document offers glimpses into nursing systems in sixteenth-century Spain. It also provides evidence that not all nurses in this period were members of religious orders; rather, some were paid employees.

Anonymous. (1590). *Constituciones del Hospital Real de Santiago de Galicia* [*Constitutions of the Royal Hospital of Santiago, Galicia*]. Madrid, Spain: S. n. Retrieved from https://minerva.usc.es/xmlui/bitstream/handle/10347/7131/b11165704.pdf?sequence=1&isAllowed=y



CONSTITVCIONES
delaño de 1590.

DON PHELIPE POR LA gracia de Dios Rey de Castilla, de Leon, de Aragon, de las dos Sizilias, de Ierusalen, de Portugal, de Nauarra, de Granada, de Toledo, de Valencia, de Galicia, de Mallorca, de Seuilla, de Cerdeña, de Cordoua, de Corcega, de Murcia, de Iaen, de los Algarues, de Algezira, de Gibraltar, de las Islas de Canaria, de las Indias Orientales, y Occidentales, Islas y tierra firme, del Mar Occeano, Archiduque de Austria, Duque de Borgoña, de Brauante, y Milan, Conde de Absburg, de Flandes, y de Tirol, y de Barcelona, Señor de Vizcaya, y Molina, &c. A vos el Administrador Retor, Mayordomo, Capellan mayor, Capellanes, y los otros oficiales de nuestro Hospital Real de Santiago de Galicia, assi à los que agora soys, como a los que seran de qui adelante, y a cada vno de vos. Ya sabeis que conforme à las Constituciones del

A dicho

Figure 5.3: Front page of *Constituciones del Gran Hospital Real de Santiago* (1590)

The 1590 version of the *Constituciones* for the Royal Hospital of Santiago provides a testament to how the hospital transformed over the previous seven decades. This document is 39 pages long and consists of 25 constitutions, ranging from the cleaning of beds to how to provide hospitality to pilgrims. Information is presented differently in this version of the *Constituciones*; notably, some position descriptions have been removed (e.g., the gardener's duties are no longer documented); the language is less authoritative (e.g., statements such as 'I ordered' are absent) and the remuneration, duties and obligations of each position are distributed throughout the document. The role of the junior nurses is more visible to the reader. For example, *menores* (minors) is appended to the title of *Constituciones* 4: 'The senior nurse, and minors' (p. 6). However, the description of their role within this section is negligible.

This version of the *Constituciones* also offers more explicit examples of the senior nurse's core duties. The manuscript indicates that an essential task of the senior nurse was attending the doctors' round with the apothecary. During this round, it was the nurse's responsibility to carefully write the doctor's prescriptions for a patient's diet and remedies in a book. The *Constitutions* also advised that the senior nurse was required to identify each patient's prescribed regimen in the book using bed numbers as opposed to patients' names to minimise the risk of nurse error.

Comparable to the earlier edition of the *Constitutions*, there is trivial mention of the role of female nurses or midwives. This description is scant and only addresses their entitlements as opposed to their core duties. For example, page 25 of the manuscript indicates that an *Enfermera Mayor* (a female senior nurse) and *enfermeras* (the feminine form of nurses) were employed at the hospital because they were included in the list of staff entitled to a ration of candles.[42]

[42] This vagueness may be deliberate, resulting from the increasing medical reforms and regulations instigated through the *Tribunal del Protomedicato* from 1530 onwards—one of which was the need to identify and castigate non-graduate practitioners, including midwives (Clouse, 2016).

5.5 Seventeenth-century Manuscripts

Congregation of Bernardino de Obregon. (1634). *Constituciones y regla de la Minima Congregacion de los Hermanos enfermeros pobres* [Constitutions and rules of the Congregation of the Brothers Minima Poor Nurses]. Madrid, Spain: Francisco de O'campo. Retrieved from https://archive.org/details/A150040/page/n3/mode/2up

Figure 5.4: Title page of *Constituciones y Regla de la Minima Congregacion de los Hermanos Enfermeros Pobres* (1634)

This manuscript outlines the governance of the Congregation of Bernardino de Obregon. Key topics discussed in this document include admittance into the congregation, conditions in which a brother could be dismissed from the congregation, vows taken upon admittance, prayers and other acts of devotion undertaken by the brothers and the roles and responsibilities of various senior positions within the congregation. These rules and regulations are divided into seven different treatises. While the manuscript is typeset, the fourth treatise, which describes the dismissal processes for an underperforming brother, was removed and replaced with 15 pages of handwritten advice.

The brothers were required to take four vows upon admission to the congregation—obedience, chastity, poverty and hospitality. Within the discussion of the vow of hospitality (Chapter 6 of Treatise 1), core aspects of Obregonian nursing are introduced. In this section, the brothers are urged to care for the sick-poor by giving them the 'love that mothers have for their children' (fol. 8). An overview of general nursing cares is provided, including: comforting the infirmed—psychosocial, spiritual and physical; providing remedies; implementing hygiene cares—washing the person's body and hair, nail trimming and mouth cares; replacing soiled clothes with clean ones; labelling the person's belongings; placing a tablet above the person's bed with their name, bed number and admission date; meal provision; and cleaning the wards. Basic infection control measures were also described, including the need to separate beds 'because of the damage they can cause to sick people' (fol. 13), 'avoiding the throwing of water and other things on the floor' (fol. 13) and provide each person their own chamber-pot. Information is also provided on how the brothers should perform the last offices for the deceased. For example, the nurses were urged to move the deceased 'in silence so as not to upset the other patients' (fol. 13).

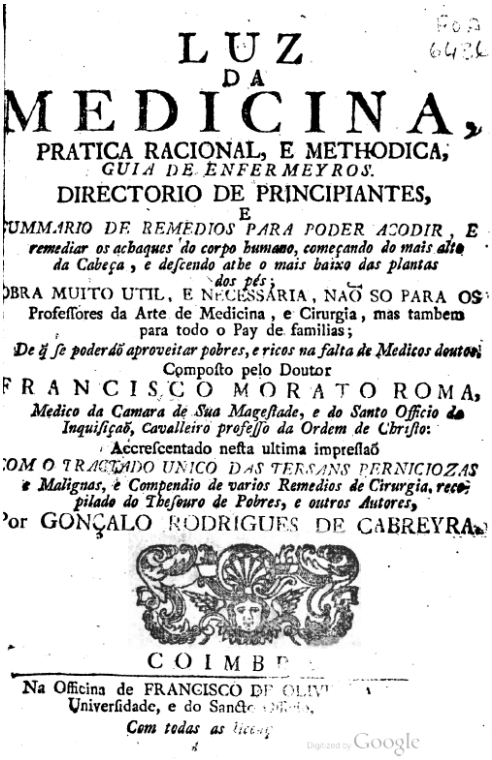
This chapter also provides insights into the interprofessional relationships within the hospital. The senior brothers and senior nurses were expected to teach novices on the religious and nursing practices of the congregation. The brothers who assumed a direct caregiver role—referred to as *enfermeros* (nurses)—were required to attend doctors' rounds, update physicians and surgeons on the condition of their patients and write updated medical orders (apothecary remedies and diet requirements) on a tablet to notify other staff of prescription changes. While nurses were required to follow doctors' orders, they were also expected to be able to modify such orders to suit the patient's condition and needs. A caveat was made that while it is not the nurses' role to perform bloodletting or other surgical procedures, they may attempt such tasks in emergent situations.

The role and responsibilities of the senior nurse are found in Treatise 6—the section that summarises the executive offices of the congregation. Brothers who assumed this position were required to possess a vast experience, demonstrate upmost charity to the sick-poor and show great punctuality (fol. 72). The senior nurse supervised his more junior nurses' conduct, such as checking the wards were cleaned at least twice daily; ensuring remedies were prepared and administer as ordered; coordinating night-watch staffing and offering comfort to the sick by providing 'good words' to them (fol. 72). Each day at dawn, the senior nurse visited the wards to encourage the 'sick to give thanks to God' and conduct prayers such as *Our Father* and *Hail Mary* (fol. 74). At dusk, the senior nurse was required to check places outside the hospital grounds, where the sick-poor were known to gather, offering shelter to those in need.

These *Constituciones* complements the Obregonian nursing treatise, *Instruccion de Enfermeros,* because it provides insights into the overarching governance of the Congregation of Bernardino de Obregon during the early seventeenth century. Several commonalities surrounding core nursing tasks are also evident between this publication and the earlier Spanish works.

5.6 Eighteenth-century Manuscripts

Roma, F. M., & Cabreyra, G. R. (1753). *Luz da medicina prática racional e metódica: Guia de enfermeyros, directório de principiante* [Light of practical and rational methodical medicine: A guide for nurses, directory for beginners] (9th ed.). Coimbra, Portugal: Francisco de Oliveyra. Retrieved from https://books.google.com.au/books?id=CKHrSWAWpScC&printsec=frontcover&dq=Francisco+Morato+Roma&hl=en&sa=X&ved=0ahUKEwjJ7Peh54LhAhUKcCsKHe5wBB4Q6AEIKjAA#v=onepage&q=Francisco%20Morato%20Roma&f=false



LUZ
DA
MEDICINA,
PRATICA RACIONAL, E METHODICA,
GUIA DE ENFERMEYROS.
DIRECTORIO DE PRINCIPIANTES,
E
SUMMARIO DE REMEDIOS PARA PODER ACODIR, E remediar os achaques do corpo humano, começando do mais alto da Cabeça, e deſcendo athe o mais baixo das plantas dos pés;
OBRA MUITO UTIL, E NECESSARIA, NAÕ SO PARA OS Profeſſores da Arte de Medicina, e Cirurgia, mas tambem para todo o Pay de familias;
De ij ſe poderão aproveitar pobres, e ricos na falta de Medicos doutos.
Compoſto pelo Doutor
FRANCISCO MORATO ROMA,
Medico da Camara de Sua Mageſtade, e do Santo Officio da Inquiſiçaõ, Cavalleiro profeſſo da Ordem de Chriſto:
Accreſcentado neſta ultima impreſſaõ
COM O TRACTADO UNICO DAS TERSANS PERNICIOZAS e Malignas, e Compendio de varios Remedios de Cirurgia, recopilado do Theſouro de Pobres, e outros Autores,
Por GONÇALO RODRIGUES DE CABREYRA.
COIMBRA
Na Officina de FRANCISCO DE OLIV... Univerſidade, e do Sanct...
Com todas as licenç...
Digitized by Google

Figure 5.5: Title page of *Luz da Medicina Prática Racional e Metódica* (1753)

Luz da Medicina is a medical-surgical manual written for Portuguese nurses. First published in 1664, only the ninth edition is available as a digitised source. The authors' intention for the book was to assist the nurse in knowing how to administer medications at the appropriate time and to provide advice for people living in remote areas who did not have access to medical and health care. The information presented in this book is organised into three parts: general principles of health care; an overview of specific conditions and a compendium of the 'many and miscellaneous' remedies and surgical procedures (p. xi).

The first section of the manual provides a general overview of health care, which according to Roma and Cabreyra consisted of administering diet, remedies and surgery (procedures). Within this section, Roma and Cabreyra explain the differences between internal and external remedies and introduce the reader to the purpose of different 'surgeries', such as bloodletting because 'all diseases, causes of diseases; and symptoms are healed by applying opposing remedies, just as one takes away the shadow with the presence of light' (p. 5). The fundamental principles governing the administration of remedies are presented by Roma and Cabreyra. Such explanations provide information about the timing, sequencing and preparation of routine remedies, such as purgatives and expected outcomes, and adhere to humoralist beliefs. While such treatments helped expel the disease, other practices were necessary to maintain vital functioning, including the role of diet and fluids in restoring health, promoting silence and air quality in the sickroom and ridding the body of the 'passions of the soul' (anger and other hostile emotions) because such things were necessary to 'nourish and improve the sick' (p. 3). Roma and Cabreyra also warn of the perils of immoral behaviour, such as engaging in 'illicit coitus' because too much sexual intercourse was believed to detrimental to the human body through decreasing it natural heat and strength and 'offend[ing]' the nerves (p. 19).

The second part of the book is divided into four sections: head, upper region, lower region and fever. The head treatise is divided into 10 smaller treatises, including different hair conditions (e.g., alopecia, lice and dandruff), different types of headaches (including migraines), mental health issues (e.g., depression and dementia), nervous system disorders (e.g., epilepsy, paralysis, apoplexy, tremor and stupor) and several eye (e.g., poor night vision, cataracts and blindness), ear (e.g., deafness and tinnitus), nose and dentition problems. The upper region treatise is divided into two smaller treatises—one for cardiovascular conditions and the other for respiratory problems. The lower region treatise contains a diverse range of gastrointestinal conditions (e.g., cirrhosis, colic and ascites), renal problems (e.g., incontinence, retention and

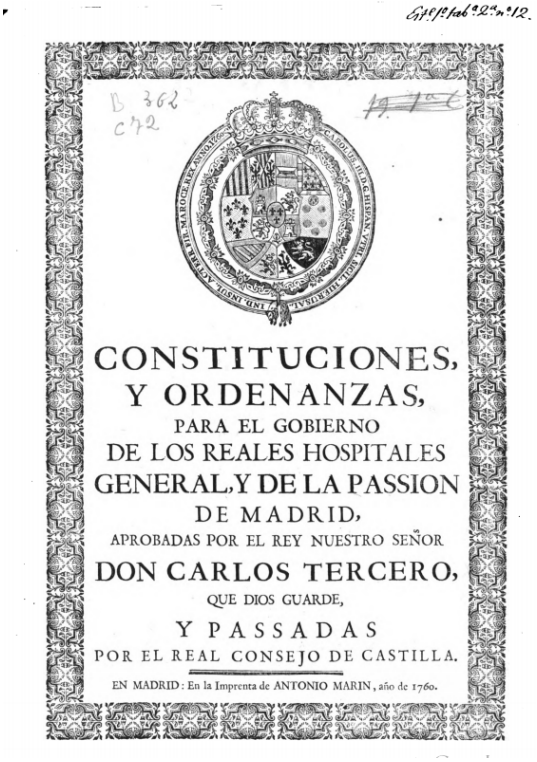
‘copious urine which authors call diabetes’; p. 257), ‘testicular conditions’ (e.g., varicoceles, gonorrhoea and impotence; p. 267) and musculoskeletal issues (e.g., gout, sciatica and arthritis). Unlike earlier books, it also contains an overview of women’s health issues, including the ‘purging’ that occurs with menstruation, pregnancy, birth, stillborn management and care of the newborn (p. 297). The inclusion of such topics suggests ‘women’s business’ was steadily becoming more medicalised during this era. The fourth treatise describes different forms of fever (e.g., continuous rotting fevers, simple blood fever, malignant fevers and daily fevers) and their management. In these descriptions, the symptomology, possible aetiology and treatment of each condition are described. For example, in the case of diabetes, the signs included the production of copious, malodourous urine, which was followed by weight loss. Roma and Cabreyra believed diabetes was either a secondary complication or the result of ‘tempering’ the kidney. During the early signs of diabetes, moderate and frequent bloodletting was indicated; however, it also indicated that death was likely to ensue.

A variety of targeted remedies are presented in the third section of the book. Each remedy addressed a specific ailment (e.g., somnolence, insomnia, toothache, gingivitis or burns). These chapters provided a number of alternative remedies that could treat the ailment. For example, in the chapter on burns, formulas for eight different topical remedies are outlined. Such recipes included ‘a very good remedy’ consisting of honey and oil mixture and application of an egg yolk or wine to the burn (p. 396). More complex remedies were also found in this section of the manual, including a separate treatise on the clinical indications of antimony. This treatise detailed antimony’s preparation as an infusion, its clinical indications for use and whether antimony should be considered poisonous.

Luz da Medicina provides a comprehensive and sophisticated discussion on a broad range of medical conditions. This depth of discussion is both a strength and a weakness because such

explanations tend to overshadow other less-scientific aspects of nursing practice (e.g., promoting comfort). Consequently, it is quite different to other earlier Iberian books.

General Hospital of Madrid. (1760). *Constituciones y ordenanzas para el gobierno de los Reales Hospitales General y de la Passion de Madrid* [Constitutions and orders for the government of the General Hospital of Madrid and Hospital of Passion]. Madrid, Spain: Antonio Marin. Retrieved from https://books.google.com.au/books?id=Q3inDOiOAbkC&printsec=frontcover&dq=Constituciones+y+ordenanzas+para+el+gobierno+de+los+Reales+Hospitales+General+y+de+la+Passion+de+Madrid&hl=en&sa=X&ved=0ahUKEwjhttvf3vPoAhXYAnIKHXXlDcIQ6AEIKjAA#v=onepage&q=Constituciones%20y%20ordenanzas%20para%20el%20gobierno%20de%20los%20Reales%20Hospitales%20General%20y%20de%20la%20Passion%20de%20Madrid&f=false



CONSTITUCIONES,
Y ORDENANZAS,
PARA EL GOBIERNO
DE LOS REALES HOSPITALES
GENERAL, Y DE LA PASSION
DE MADRID,
APROBADAS POR EL REY NUESTRO SEÑOR
DON CARLOS TERCERO,
QUE DIOS GUARDE,
Y PASSADAS
POR EL REAL CONSEJO DE CASTILLA.
EN MADRID: En la Imprenta de ANTONIO MARIN, año de 1760.

Figure 5.6: Title page of *Constituciones y Ordenanzas para el Gobierno de los Reales Hospitales General y de la Passion de Madrid* (1760)

This document describes the 1760 constitutions and ordinances of Madrid General Hospital and Hospital de la Passion (Madrid's women's hospital). These two hospitals were established in the sixteenth century and were administered by the Congregation of Bernardino de Obregon.[43] The first section details the principles of the document and describes the governance structure

[43] This is the same congregation who wrote *Instruccion de Enfermeros*.

of the organisation, including the role of the hospital council and government board. Guidelines are provided on how to admit employees into the organisation and how to conduct annual inspections of the regional hospitals. The second part of the document, the ordinances, explains the functions of different departments and positions within the hospital, including laundry, procurement, kitchen, apothecary, administration and clerical roles. Medical staff included physicians, surgeons, *practicantes* (practitioners—*Protomedicato*-approved apprentices in medicine or surgery), *sangradores* (phlebotomists), a director of anatomy and an anatomy professor.

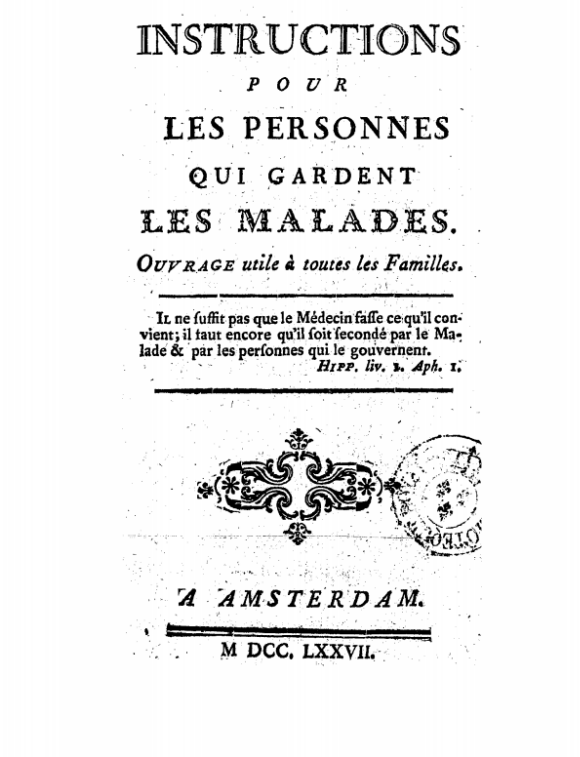
Chapter 2 of the ordinances section describes the role of the senior nurse. The senior nurse was responsible for overseeing the conduct of the nurses and practitioners within the hospital. These duties included ensuring: other staff were woken each morning; medicinal meals and remedies were administered in accordance to physicians' orders; resources (i.e., clothing, medicines, equipment or rations) were not misappropriated; staff did not leave the hospital without permission and disciplinary action was enacted for underperforming nurses and practitioners. The senior nurse was also expected to attend ward rounds and make subsequent spot-checks of different wards to ensure meals and remedies were appropriately administered. If the senior nurse identified lapses in such activities, they were expected to instruct the nurse/practitioner on how to correct this missed clinical care and, if needed, discipline the nurse/practitioner.

Chapter 18 of the ordinances explains the different governance structures of the Hospital de la Passion, including the role of the matron. The matron was responsible for overseeing the conduct of nurses and apothecaries, including ensuring the economical use of resources and cleanliness and tidiness of the ward. Cleaning tasks delegated to the nurses included regularly sweeping the floors, making beds, cleaning ward equipment (e.g., chamber-pots) and offering

charity. The ordinances make it clear that the matron is 'ultimately … responsible for all the faults, omissions and carelessness' that occur in their wards (p. 98).

The topics surrounding patient care in this document show a growing medicalisation within Madrid General Hospital. While some minor references are made to *enfermeros* (nurses), large sections of the document are dedicated to describing different medical and surgical roles within the hospital. The document also indicates some activities previously performed by nurses (e.g., admitting patients to the hospital and administering some remedies) were subsumed by the new practitioner role. Another example of this trend towards medicalisation is the disbandment of the hospital's barber. The ordinances inform the reader that bloodletting and surgical procedures, key tasks once assumed by a barber, were at some point reassigned to surgeons and phlebotomists. Such examples of task-shifting demonstrate the gradual decline of Spanish nursing's *Siglo de Oro* (golden age) in this period.

Serain, P. E. (1777). *Instructions pour les personnes qui gardent les malades* [*Instructions for people who keep the sick*]. Amsterdam, The Netherlands: S. n. Retrieved from https://gallica.bnf.fr/ark:/12148/bpt6k110146c/f2.image



INSTRUCTIONS

POUR

LES PERSONNES

QUI GARDENT

LES MALADES.

Ouvrage utile à toutes les Familles.

Il ne ſuffit pas que le Médecin faſſe ce qu'il convient; il faut encore qu'il ſoit ſecondé par le Malade & par les perſonnes qui le gouvernent.
Hipp. liv. 2. Aph. 1.

A AMSTERDAM.

M DCC. LXXVII.

Figure 5.7: Title page of *Instructions pour les Personnes qui Gardent les Malades* (1777)

While this 153-page book was published in Amsterdam, the book was written in French by Pierre-Eutrope Serain (1748–1820). The second edition was released in 1788 and had a new author—Jean Benjamin D'Apples Jnr of the College of Medicine, Lausanne, Switzerland. The intent of *Instructions* was to provide a written guide on the 'art of governing the sick in the absence of doctors' (p. 2) because Serain believed relying on verbal instructions was 'always inadequate, and almost as quickly forgotten as received' (p. 2).

The book is organised into four parts. The first part provides general guidelines on the management of the sick. It opens with a discussion on the qualities and duties of the nurse. Qualities discussed included the need to be dedicated and of a 'good constitution' so that the nurse was able to endure the physical labour of nursing (p. 5). Other desirable qualities of a nurse were: intelligence, discretion, cleanliness and vigilance. The nurse was also expected to

be sober and refrain from being overly talkative. Core duties of the nurse included undertaking the orders of the doctor, keeping the patient clean, recording changes in the patient's condition, assisting the patient with activities of daily living and offering emotional support to the patient.

The next two chapters provide guidance on preparing the sickroom and sickbed. Suggested sickroom equipment included: a chamber-pot, a commode, a urinal, basins, bowls, glasses, clean water, linen and paper to record the patient's condition and medications. The sickroom needed to be a dedicated room that had 'good air' (p. 4); thus, it needed to be away from places cited as interrupting air quality, including 'rivers, swamps, ponds' (p. 4) and 'fires or stoves' (p. 8). In cases of poor air quality within the sickroom, Serain advised that burning incense and the use of vinegar-spiked fumigations can quell the 'bad vapours' (p. 14). The sickroom was also required to be have adequate heating and sunlight, meaning it may need to be moved according to season. Serain recommended that the sickroom temperature needed to be maintained at 17 degrees Reaumur (21.25 $^{\circ}$C) or as per the physician's recommendations.

General guidelines are then presented on the routine management of the sick person. Critical to the success of these recommendations was the need for the nurse to comply with the physician's orders—Serain believed death could result from nurse noncompliance. The nurse was encouraged to mobilise the patient several times a day if the patient was relatively well and did not suffer from conditions such as haemorrhage or fever. Protecting the patient from overexcitement was also an important task of the nurse because unwelcome visitors or hearing good or bad news were thought to be detrimental to patient health. Instead, the nurse was encouraged to provide amusing tales. Such storytelling was thought to produce a 'very good effect' on patient health (p. 23). Other core nursing tasks discussed included the promotion of

sleep through strategies such as reducing noise and managing the patient's 'natural evacuations' (p. 23).[44]

Part 2 of the book describes the precautions that needed to be taken when using medicaments. Part 2 contains chapters on broths and beverages used for the sick, and chapters on each medicament formulation. The formulations described in this section include liquid solutions, powders, fomentations, eye drops, gargles, cataplasms, pills, enemas and suppositories. Tips were also provided on the administration of each formulation. For example, with clysters, the nurse was urged to 'avoid using a liquid which was too hot or cold', 'keep the little syringe clean' and avoid depressing the plunger 'too violently' unless the physician had ordered it to be administered in such a manner (pp. 46–47). This section of the book also provided advice on wound dressings, medicinal baths, bloodletting and assisting with surgery.

In Part 3, Serain describes additional treatments and cares for patients presenting with common conditions. The care requirements of each condition are presented as a separate chapter, including fevers, inflammatory conditions (e.g., gout, laryngitis, pleurisy and pneumonia), 'eruptive diseases' (sweats and rigours), 'convulsive diseases' (sneezing, hiccups, delirium, 'rage' and epilepsy), syncope, haemorrhage, pain, neuroses and coma. However, the advice in these chapters is superficial and mostly lacks scientific reasoning. For example, in the care of an unconscious patient, Serain recommended that 'it is important to torment [stimulate] the sick' (p. 88). Recommended methods for agitating the patient included the nurse pinching them, striking them, rubbing their skin with coarse linen or 'flogging them with nettles' (p. 88).

Within this section, three chapters are dedicated to birthing, care of the postpartum woman and newborn. During the intrapartum period, the nurse was required to follow the directions of the

[44] Natural evacuations typically referred to the normal excretion of body fluids such as urine, faeces and perspiration.

midwife or *accoucheur* (male midwife). The nursing cares provided during the postpartum period primarily focused on environmental considerations, such as avoiding overheating the room and removing flowers and 'disagreeable odours' from the room (p. 94). The nurse was also instructed to limit any 'surprise' or 'sorrow' experienced by the woman because such anxiety was deemed the 'cause of many woes, and even death' (p. 95).

Part 3 of the book concludes with recommendations about caring for the deceased patient. Serain advised the reader that the corpse should remain in the bed for at least 24 or 48 hours, with only the head exposed; this practice ensured the family could mourn the loss. With the exceptions of deaths from old age, haemorrhage, plague or other 'putrid diseases', Serain recommended that the corpse should not be buried until there were signs of decomposition, such as malodour, to ensure the person was truly dead (pp. 107–108). In the meantime, stimulation techniques were to be used by the nurse to try to rouse the person, such as opening the windows, rubbing down the body with a cloth or nettles, blowing tobacco or pepper into the person's nose, administering an enema that contained tobacco and/or applying several vesicatories on the body.[45] The nurse was required to continue with such stimulation until the doctor arrived or signs of decomposition appeared.

Part 4 of the book contains the recipes for routine remedies for the nurse can prepare and administer. While this section is not as extensive as other books published during this period, it does contain several recipes for each type of possible remedy, including a variety of broths, teas, lemonades, poultices, suppositories, enemas and purgatives. The final chapter of this section concludes with some advice on how a nurse (and their employer) can maintain their own health.

[45] Vesicatories were agents applied to the skin to cause blistering.

While the information in this book is less sophisticated than that of earlier manuals such as *Instruccion de Enfermeros*, Serain adequately achieved what his objective—to provide guidelines for nurses in the absence of the doctor. This book highlights the developing trend of environmental care (e.g., monitoring air quality and room temperature) that later became a central focus of nineteenth-century nursing practice.

Mai, F. (1784). *Unterricht für krankenwärter zum gebrauche öffentlicher vorlesungen* [*Teaching for nurses for the use of public lectures*] (2nd ed.). Mannheim, Germany: Schwan. Retrieved from https://books.google.com.au/books/about/Unterricht_f%C3%BCr_Krankenw%C3%A4rter_zum_Gebra.html?id=tF1cAAAAcAAJ&redir_esc=y

Unterricht
für
Krankenwärter
zum Gebrauche
öffentlicher Vorleſungen,
von
Franz May,
der Weltweisheit und Arzneiwiſſenſchaft Doktor,
kuhrpfälziſchem Hofmedikus, auch auſſerordentlichem
Lehrer der Arzneiwiſſenſchaft auf der hohen
Schule zu Heidelberg.

Zweite verbeſſerte Auflage.

Mannheim,
in der Schwaniſchen Buchhandlung
1784

Figure 5.8: Title page of *Unterricht für Krankenwärter zum Gebrauche Öffentlicher Vorlesungen* (1784)

Unterricht fur krankenwarter was written by Franz Anton Mai (also known as May, 1742–1814), a German physician and professor of medicine and obstetrics. The first edition of this 223-page manuscript was published in 1734. However, as it is not available as a digitised source, the second edition was used for analysis. In 1781, Mai established a nursing school in Mannheim (Huber, 2019).[46] Mai referred to his school in the preface of the book, in which he indicates that oral lessons make more of an impression on apprentices than do written doctrines.

[46] This innovation was controversial because it only offered theoretical instruction to nurse apprentices (Nutting & Dock, 1907).

The content of *Unterricht* is divided into two parts: general care principles and the care of people with particular illnesses. The first part describes the general maintenance and care of the sick. The section opens with an overview of the qualities of a good nurse, including the physical characteristics—a 'healthy, strong, neither young nor too old body' was preferred over nurses who were frail or exhausted—and affective traits, such as being observant, silent, faithful, pious and non-superstitious and demonstrating a benevolent and sensitive demeanour (pp. 11–12). During this discussion, Mai asserted that trained nurses should be held to the same standard as a policeman or experienced obstetrician because they are 'just as necessary to the population' (p.12). This section also provided advice on how the nurse can keep healthy, including by refraining from consuming meals in the sickroom and ensuring adequate sleep.

This section also provides rules for the cleaning the sickroom. Improving air quality was the core focus of this chapter because Mai viewed 'pure air as being the best life balm for living creatures' (p.16). He then embarks on a lengthy discussion, crudely explaining how air is produced and warning the reader that impure air can result in a myriad of mishaps, ranging from the spoiling of food—causing fainting in sensitive women and girls attending funerals—to the death of a bird kept in a glass container. Following this explanation, Mai lists methods for purifying the air so that the patient is 'not poisoned', including 'refreshing the air' and limiting long visits from 'kind-hearted women' because their complaints were believed to distress the patient and spoil the air (p. 39). Other strategies to maintain a clean sickroom included the regular laundering of linen and the frequent bathing of patients; he believed the pores of the skin could absorb miasmas and other fine particles.

A broad overview of the diet and fluids required by the sick is also included in this section. Mai encouraged the reader to listen to the patient's basic sensations of hunger, thirst and satiety—for example, the patient was only provided with food or fluids when they were hungry or thirsty,

not because the nurse believed they needed it. The provision of diet and fluids are further discussed in the book's appendix, in which Mai supplied individualised guidelines for 24 conditions. Each dietary guideline consists of a list of acceptable meals and beverages for the particular condition and, when applicable, other care considerations (e.g., appropriate incense to be used within the sickroom). This information is followed by a basic summary of medicinal baths, enemas and poultices. Rather than focusing on the remedy's ingredients and procedural guidelines, Mai limited his explanations to the nurse's need to follow medical orders instead of using their own 'imaginative knowledge' or engaging in 'self-doctrines and quackery' (p. 224).

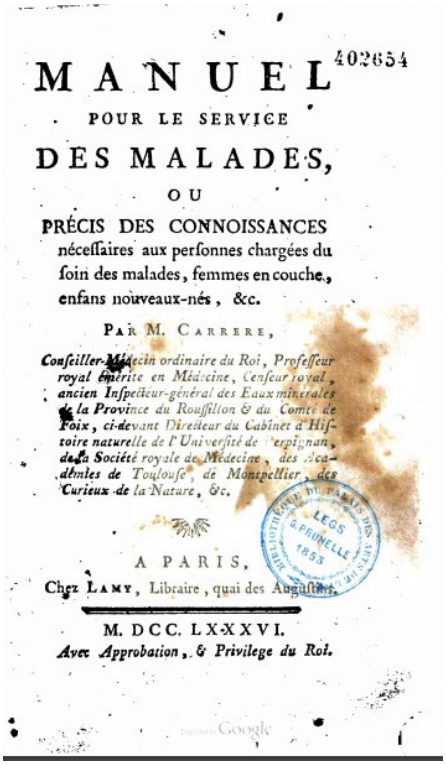
These foundational topics were further explained in the second part of *Unterricht.* The special population groups discussed in this section are pregnant women, babies, children with common childhood illnesses (i.e., measles or smallpox) and those suffering from long-term conditions (e.g., gout). The final chapter in Part 2 details the emergent care required by injured individuals (e.g., poisoning, burns, asphyxiation and animal bites). Many of these cares were based on stabilising the victim until the physician or surgeon could attend. For example, in the case of suspected poisoning, the nurse could anticipate signs and symptoms such as violent stomach pains, vomiting, burning in the mouth and throat, thirst and cold sweats. As soon as the nurse observed such signs in the patient, their initial treatment was to summon the physician. While waiting for the physician to arrive, the nurse was required to initiate interventions such as offering the victim lukewarm milk or water to drink, stimulating a gag reflex to induce vomiting or administering an enema made with flaxseed oil (p. 160).

Through reading *Unterricht*, Mai's obvious aversion of nurses who engaged in quackery or superstition is evident:

> It is much to be regretted that almost every nurse, when she heals a cure here and there through long association with doctors and surgeons, gradually degenerates himself into an irrepressible quack, into a medical indisposition. (p. 83)

Despite this abhorrence, Mai paradoxically presents frequent examples of quackery in his own explanations for why certain nursing activities should be performed. Mai's somewhat questionable claims in *Unterricht*, meant that this book was critiqued by numerous late eighteenth- and nineteenth-century authors (including some of those cited within this corpus), with most claiming their own content was more sophisticated and scientific than Mai's work. In spite of these criticisms, *Unterricht* remains an important testament of early German nursing education.

Carrère, J. B. F. (1786). *Manuel pour le service des malades* [*Manual for the service of the sick*]. Paris, France: Lamy. Retrieved from https://books.google.com.au/books?id=V9X6ZZTUPpYC&pg=PA196&lpg=PA196&dq=manuel+pour+service+les+malades&source=bl&ots=xMLXFA30tL&sig=ACfU3U0mWW3WKR13kV1TeoKv-u-I2qlkfA&hl=en&sa=X&ved=2ahUKEwjk4oqyj4PhAhUEWysKHeThCPAQ6AEwAXoECAcQAQ#v=onepage&q=manuel%20pour%20service%20les%20malades&f=false



MANUEL 402654

POUR LE SERVICE

DES MALADES,

OU

PRÉCIS DES CONNOISSANCES

néceſſaires aux perſonnes chargées du ſoin des malades, femmes en couche, enfans nouveaux-nés, &c.

PAR M. CARRERE,

Conſeiller-Médecin ordinaire du Roi, Profeſſeur royal émérite en Médecine, Cenſeur royal, ancien Inſpecteur-général des Eaux minérales de la Province du Rouſſillon & du Comté de Foix, ci-devant Directeur du Cabinet d'Hiſtoire naturelle de l'Univerſité de Perpignan, de la Société royale de Médecine, des Académies de Toulouſe, de Montpellier, des Curieux de la Nature, &c.

A PARIS,

Chez LAMY, Libraire, quai des Auguſtins.

M. DCC. LXXXVI.

Avec Approbation, & Privilege du Roi.

Figure 5.9: Title page of *Manuel pour le Service des Malades* (1786)

Carrère's 215-page manual was written to assist with the training of nurses in hospitals and domestic settings.[47] The manual proved so popular that it led to the release of three French editions between 1786 and 1788, and the translation and adaptation of the manual for use in

[47] There is some confusion about whether *Manuel* was written by Joseph-Barthelemy-Francois Carrère (1740–1802) or his father, Thomas Carrère (1714–1764), who was also a physician. Most digitised copies of *Manuel* are attributed to Joseph. However, a couple of sites list the author as Thomas for the 1787 edition. A review of the positions held by the author, confirms that the author was Joseph.

other countries, including Italy, Germany and Spain.[48] The manual is divided into seven chapters. Chapter 1 describes the qualities nurses must possess to care for the sick, including the need for cleanliness, trustworthiness and temperance. Chapter 2 details the behaviours demonstrated by nurses when caring for the sick and introduces the reader to the importance skill of observation. The third chapter describes specific nursing interventions needed for a variety of conditions, including fever management, nausea and vomiting, syncope, dehydration and active bleeding. It also provides an overview of birthing and postnatal care.

Chapter 4 provides a detailed overview of basic physical assessment skills. For example, the psychomotor aspects of skills such as pulse assessment are described—how to take a pulse; pulse characteristics that should be observed (rate, rhythm, strength and bilateral symmetry); the indication for, and frequency and timing of, the assessment; and how to interpret the result according to age, gender and activity level. The reader is also informed on possible explanations for why an abnormal finding may occur. Carrère describes the signs and symptoms associated with several conditions, including pyrexia and dehydration.

The procedural aspects of remedy administration are explained in Chapter 5. This chapter summarises the different remedy formulations (e.g., salts, pills, potions, emetics, purgatives, poultices, enemas and suppositories) and specialised interventions (e.g., leeching) that may be ordered by medical staff. Such discussions provide practical advice regarding precautions about the remedy's use, indications for its use, the timing of administration and when a particular remedy should be ceased or suspended. The preparation of such apothecary treatments are

[48] In the Spanish edition of *Manuel*, translator Dr Francisco Salva noted that Carrère's manual had similarities to the 1664 edition of *Instruccion de Enfermeros*. While Salva stated the manual is more methodical than *Instruccion,* he reiterated the salient contributions of the Obregonians to nursing, especially their emphasis on maintaining ward cleanliness and person hygiene. Salva also intimated that at the time, such hygienic care recommendations were ridiculed in England.

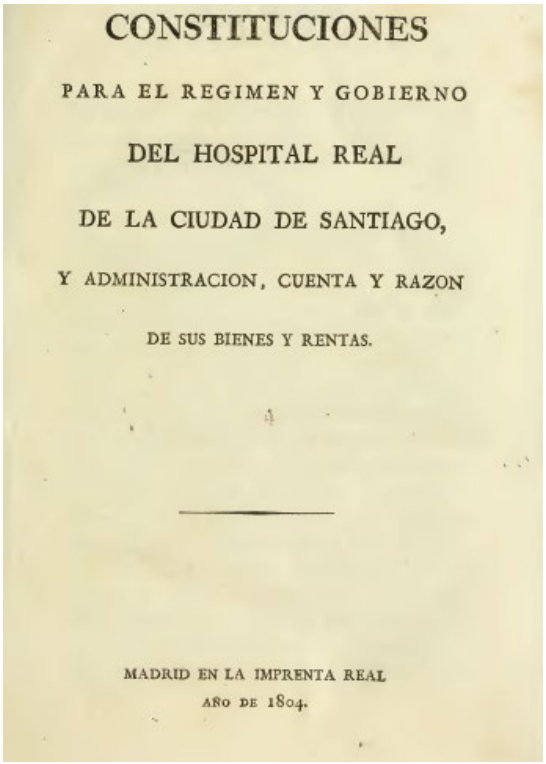
described in the next chapter. A number of recipes for common dietary prescriptions (e.g., different herbal teas, broths and jellies) are also found in Chapter 6.

In the final chapter of the manual, Carrère details precautions that nurses should take when dealing with contagious patients. While several contagious diseases are mentioned, including scabies, smallpox, measles and scarlet fever, general rather than disease-specific recommendations are presented. These recommendations include minimising the risk of disease spread by grouping similar patients together and strategies to reduce the miasma load in the sickroom.

Carrère's manual provides a comprehensive account of core nursing practices during the late eighteenth century. The text-rich descriptions are underpinned by straightforward explanations of anatomy and humoral physiology, affording the reader a comprehensive understanding of the intervention. The way information is presented in the manual suggests that Carrère respected the important role of a knowledgeable nurse in improving patient outcomes.

5.7 Nineteenth-century Manuscripts

Royal Hospital of Santiago. (1804). *Constituciones para el regimen y gobierno del Hospital Real de la Ciudad de Santiago, y administración, cuenta y razón de sus bienes y rentas* [*Constitutions for the regime and government of the Royal Hospital of Santiago and administration, an account of their assets and income*]. Madrid, Spain: Imprenta Real. Retrieved from https://archive.org/details/constitucionespa00madruoft/page/n4/mode/2up



CONSTITUCIONES

PARA EL REGIMEN Y GOBIERNO

DEL HOSPITAL REAL

DE LA CIUDAD DE SANTIAGO,

Y ADMINISTRACION, CUENTA Y RAZON

DE SUS BIENES Y RENTAS.

MADRID EN LA IMPRENTA REAL

AÑO DE 1804.

Figure 5.10: Title page of *Constituciones para el Regimen y Gobierno del Hospital Real de la Ciudad de Santiago* (1804)

This manuscript details the regulations of the Royal Hospital of Santiago de Compostela. The *Constituciones* provides an overview of hospital governance and funding, including descriptors of staffing and key duties performed by nurses. The medieval functions of European hospitals are still evident in these constitutions even though they were published in the early nineteenth century. The rations, type of bedding and length of stay for each group were noted within the *Constituciones*. For example, pilgrims were allowed to stay for three days in summer and up to five days during winter (p. 94). The hospital consisted of gendered wards and lodgings with

female nurses caring for female patients and male nurses caring for male patients. The *Constituciones* state that 15 nurses were employed at the hospital: one senior male nurse, one senior female nurse, nine junior male nurses and four junior female nurses. Six male 'inferior servants' (akin to orderlies) and three female domestic staff were managed by senior nurses.

Entitlements of staff working in the hospital were detailed in the *Constituciones*, including salary, daily rations and accommodation. The male senior nurse's annual salary was 1,732 reais and 4 maravedis, and a daily ration of 2 pounds of first-class bread, 1.5 pounds of beef and 2 quarts of wine.[49] While the senior female nurse received the same bread and meat ration, her salary was substantially less—only 480 reais—and her wine ration was decreased to 1 quart per day. Junior nurses were paid between 240 and 400 reais annually and received a daily ration of 1 pound of beef, 1.5 pounds of second-class bread and a quart of wine.[50] All nurses employed at the hospital were either single or widowed, and required to live and sleep within the hospital compound.

Senior nurses were appointed by the hospital's administrator after scrupulous character assessments. This role's duties and obligations are explained in Chapters 18 and 20 of the *Constituciones*. Qualities such as 'being free of fraud and deception' (p. 186), demonstrating 'best behaviour' (pp. 186, 198) and being gentle disciplinarians (p. 190) to subordinates were deemed critical to the role of senior nurse. Their roles included overseeing the daily management of the wards, such as ensuring nurses and attendants fulfilled their designated duties so that the wards were kept tidy; monitoring the laundering of linen and clothing; enforcing rest periods; making beds each afternoon following the rest period; ensuring that night-watchers attended each night; and overseeing the shrouding and disposal of the deceased.

[49] Real is an ancient form of Spanish currency. The plural is reais.
[50] The more experienced the nurse was, the more remuneration they received. Yet, the disparity in pay and conditions between male and female nurses suggest male nurses were more valued than their female counterparts.

The senior nurse was also expected to escalate concerns about a patient's condition to medical staff and the hospital's chaplain so that the patient could be reviewed, treated and have the last rites administered as required.

The *Constituciones* indicates that the senior male nurse had additional responsibilities. The senior male nurse was required to write doctors' orders for medications and diet regimes 'with clarity and distinction' to avoid mistakes (p. 187). He was required to oversee and document the timing of such treatments. Patient admissions were another responsibility of this nurse. Upon admission, patients' clothes were removed, washed and stored for the period the patient remained in the general ward. Valuables were collected and safely stored during this period. The senior male nurse kept a record of these items and issued the patient/family with a ticket so that the property could be returned upon entry to the convalescent ward or discharge from the hospital. Any unclaimed belongings (e.g., left behind when a patient died) were auctioned by the hospital, presumably to help fund its resources.

Chapter 26 describes the development of a new surgical nursing team, consisting of eight nurses, to assist surgeons in the establishment of a surgical school. Within the team was a hierarchy consisting of one senior practitioner, two first practitioners and five second practitioners. The allocation of each role was based on the results of an expression of interest and an annual practical exam that was judged by three physicians.[51] Male nurses assumed the same roles of junior female nurses; however, they also had additional responsibilities, including assisting with surgery and attending doctors' rounds twice a day to update the surgeon on a patient's status. The senior practitioner was the senior nurses' second-in-charge and oversaw the daily management of the surgical team. The senior practitioner and two first practitioners' scope extended to admitting patients that required surgery. Consequently, they were excused

[51] The *Constitutions* indicate bloodletting was one skill assessed in the exam.

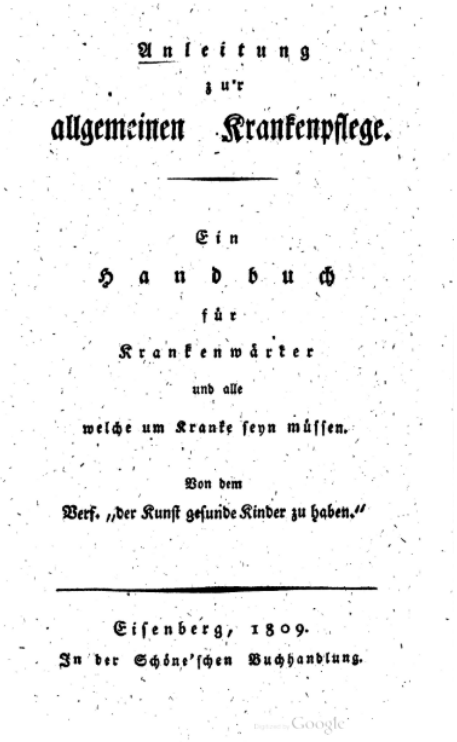
from menial tasks such as bed-making. As a result of their increased scope of practice, this group of nurses received better remuneration and conditions than their more junior counterparts. For example, the senior practitioner received 160 reais more than the second practitioners. To assist with the everyday activities of the male wards, a junior male nurse oversaw nursing care in the convalescent ward and seven male domestic servants undertook cleaning of the wards, maintaining hospital fires, lighting lanterns at night, shrouding corpses and burying the dead in graves away from the hospital.

Chapter 28 details the roles and responsibilities of the junior female nurse. Junior female nurses were expected to be intelligent, punctual and familiar 'with those of their sex without the need of the doctor', implying they would provide the care of pregnant women (p. 221).[52] Quotidian roles and responsibilities for junior female nurses were to implement medical orders, attend to the hygiene needs of the sick, provide meals to the sick and make beds. The *mozas*—domestic staff—were expected to perform cleaning tasks, such as sweeping the floors twice a day, cleaning used vessels, preparing meals for the sick, helping junior nurses make beds and washing patients' bodies as ordered by medical staff. Night-watching of the ward was shared between the junior nurse and the ward's *moza*—each performing this duty on alternate nights.

This publication provides insights into Spanish nursing system at the beginning of the nineteenth century. Its overview of the establishment of the surgical nursing team suggests that the hospital valued and trusted its nursing staff.

[52] While it is implied that female nurses would assist with childbirth, this is not explicitly described in the constitutions. The publication does mention a nursery, but does not describe the care of the infant, nor does it include any Spanish term for midwife—*comadre, comadrona* or *partera*.

Greiner, G. F. C. (1809). *Anleitung zur allgemeinen krankenpflege: Ein handbuch für krankenwärter* [*Guide to general nursing: A handbook for nurses*]. Eisenberg, Germany: S.n. Retrieved from https://books.google.com.au/books?id=huZaAAAAcAAJ&pg=PA18&lpg=PA18&dq=Anleitung+zur+allgemeinen+krankenpflege:+Ein+handbuch+f%C3%BCr+krankenw%C3%A4rter&source=bl&ots=WFUhqDVHhQ&sig=ACfU3U3hZsFnmmlsIbYBHcMwRBM6phuoeQ&hl=en&sa=X&ved=2ahUKEwj79bOnrf7gAhXLfX0KHb03BsIQ6AEwAHoECAMQAQ#v=onepage&q=Anleitung%20zur%20allgemeinen%20krankenpflege%3A%20Ein%20handbuch%20f%C3%BCr%20krankenw%C3%A4rter&f=false



Anleitung
zu'r
allgemeinen Krankenpflege.

Ein
Handbuch
für
Krankenwärter
und alle
welche um Kranke seyn müssen.

Von dem
Verf. „der Kunst gesunde Kinder zu haben."

Eisenberg, 1809.
In der Schöne'schen Buchhandlung.

Figure 5.11: Title page of *Anleitung zur Allgemeinen Krankenpflege* (1809)

Greiner's intent for this 223-page instructional guide was to correct the 'inadequate, bad and negligent' nursing care that was negatively affecting patient outcomes (p. v). Greiner claimed he wrote the book in a style intended for the 'average man' because the rich already had access to the best nurses and remedies, such as 'expensive beds with steel springs' (pp. vii–viii). This guide is arranged into four parts: merits of 'good' nursing, medication administration, general nursing cares and an overview of mood (p. ix).

The first part of this guide provides an overview on the merits of good nursing care. Greiner viewed good nursing care as essential to the effectiveness of the doctor's treatments and to limit the risk of further ailments. In turn, proper nursing care could accelerate patient recovery 'five times faster' (pp. 4–5). Rather than using the traditional model of nursing in which a family member assumed the nurse's role, Greiner instead urged the reader to consider using a professional nurse. Greiner describes the desired qualities and duties of a good nurse, including the need for the nurse to be moral, patient, loyal, docile, obedient and literate and possess vigilant observation skills. Self-discipline was also necessary to ward off gluttony (as this vice induces laziness), refrain from smoking, avoid being overly talkative (this urge to talk is 'natural' in females, p. 20) and stay awake for long periods.

The processes involved in medication administration are described in Part 2. This section opens with the remedies and administrative techniques used for oral medications (e.g., liquids, suspensions, gargles and pills) before discussing enema and suppository administration. The preparation and application of external remedies is outlined, including the use of cold packs, liniments, poultices, therapeutic baths and plasters. Plasters were used to promote wound edge approximation, cover ulcers and act on the 'whole body' (p. 73). Greiner asserts that the choice of remedy is always at the discretion of the doctor. However, nurses or patients' relatives could apply a temporary plaster while waiting for the doctor's review.

General care considerations are described in the next section of the guide. This part advises on the importance of adequate sleep, activity and nutrition for the sick. When discussing the role of nutrition in maintaining health, Greiner provides a basic overview of the gastrointestinal tract before listing guidelines for the sick diet, such as the patient only eating physician-approved foods and consuming less than normal amounts of food while ill. A list of appropriate foods and drinks are provided for the reader. This section also summarises the equipment required for

patient care (e.g., bed, chamber-pots and linen), laundering frequency and optimal environmental conditions for the sickroom (e.g., ventilation, light, bed location and room temperature). Like other authors of this period, Greiner believed adequate air quality and ventilation were of utmost importance for the infirmed. Consequently, a considerable proportion of this part is dedicated to explaining the mechanics of breathing, the dangers of poor air quality and the techniques to correct inadequate ventilation (e.g., opening windows and curtains, limiting visitors and providing an animal-free environment).

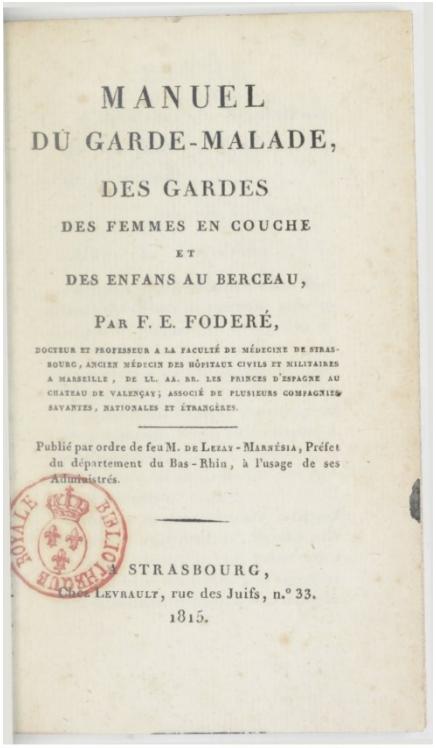
Part 3 closes with a chapter dedicated to palliating a dying patient. Greiner's recommendations for determining if a person was deceased closely resembled those of Serain. For example, he recommended that burial of the deceased be deferred until the nurse noticed signs of decomposition, such as a 'greenish colour of the skin of the abdomen, by the easy peeling of the upper part of the skin, and by the smell of putrefaction' (p. 197).

The final part of this guide introduces the reader to take 'care of the sick in consideration of mood' (p. 198). Within this section, Greiner described the potential impact of different mood states on the body and how an 'advantageous mood' can be maintained by the sick (p. 202). Greiner believed the soul was connected to the body and a 'calm, steady cheerfulness' was 'most conducive to the body' (p. 202). Accordingly, satisfaction was a sign of a healthy soul and joy was beneficial to the body because it allowed the heart to beat stronger and 'more cheerful[ly]' (p. 203). In contrast, Greiner claimed negative emotions (e.g., anger, fear, envy and shock) can act like a 'creeping poison', and left unresolved, may result in early death (p. 208). To counteract such negative emotions, Greiner urged the nurse to maintain a constant cheerfulness, avoid discussing negative information in front of the patient, use music as a distraction and instil calmness and encourage the patient to remember better times. This section also provides advice on the treatment of 'hypochrondiacal, hysterical women' because they

required their own special treatment because their nerves were ‘extremely sensitive’ (p. 221). Management of such women included treating them gently, avoiding the dismissal of their complaints because some may not be ‘imaginings’ and minimising the risk of upsetting them (p. 222).

This instructional guide is similar to its contemporaries. However, it introduces more advanced procedures, including urinary catheterisation. In keeping with empirical thinking of the period, Greiner provided enough ‘scientific’ explanations in sections such as air quality, nervous conditions and nutrition to convince the reader that his recommendations were legitimate and trustworthy.

Fodéré, F.-E. (1815). *Manuel du garde-malade, des gardes des femmes en couches et des enfans au berceau* [*Manual for nurses, midwives and care of infants*]. Strasbourg, France: Levrault. Retrieved from https://gallica.bnf.fr/ark:/12148/bpt6k6535208s.texteImage



MANUEL
DU GARDE-MALADE,
DES GARDES
DES FEMMES EN COUCHE
ET
DES ENFANS AU BERCEAU,

PAR F. E. FODERÉ,

DOCTEUR ET PROFESSEUR A LA FACULTÉ DE MÉDECINE DE STRASBOURG, ANCIEN MÉDECIN DES HÔPITAUX CIVILS ET MILITAIRES A MARSEILLE, DE LL. AA. RR. LES PRINCES D'ESPAGNE AU CHATEAU DE VALENÇAY; ASSOCIÉ DE PLUSIEURS COMPAGNIES SAVANTES, NATIONALES ET ÉTRANGÈRES.

Publié par ordre de feu M. DE LEZAY-MARNÉSIA, Préfet du département du Bas-Rhin, à l'usage de ses Administrés.

A STRASBOURG,
CHEZ LEVRAULT, rue des Juifs, n.° 33.
1815.

Figure 5.12: Title page of *Manuel du Garde-malade, des Gardes des Femmes en Couches et des Enfans au Berceau* (1815)

As its title suggests, this 130-page manual describes nursing and midwifery care. The book was endorsed by several doctors who deemed the manual a suitable resource for the training of nurses and midwives. One doctor also suggested the book could be used to train the Sisters of Charity. In the foreword, Fodéré mentions the availability of similar manuals, including those written by Serain (1777), Mai (1784) and Carrère (1786) but dismisses their value because of the complex advice offered within them. For example, with Carrère's manual, Fodéré questions the value of dedicating a large part of the book to explaining symptomology to nurses and describes the concept of pulse assessment as absurd. In this section, Fodéré also notes that some information presented in the book is repetitious but 'such repetition is necessary because of the people for whom it is written' (p.24).

The manual consists of four sections: qualities of the nurse, nursing activities, remedies and care of specific patient groups. Fodéré is frank from the outset of the first section that nurses must assume a subservient role to the physician by diligently adhering to their orders. A long list is presented regarding the ideal features of the nurse. The list consists of preferred physical features (e.g., clean presentation, free from body odour and halitosis and in good health), desired intelligence level (e.g., adroit and literate) and sought-after personality traits (e.g., unassuming, compassionate, discreet, vigilant and in possession of a calm demeanour). While describing these ideal characteristics, Fodéré also explains that nurses who are lazy, drunkards, talkative, presumptuous, 'faint-hearted' or superstitious were 'very often disastrous to the sick' (p. 26). Another risk to the sick was a nursing sister who favoured faith over science because this tendency can waste 'precious time' (p. 29).

This section also describes the precautions nurses must take to limit contagion. These precautions include techniques for improving air quality, minimising direct contact with patients through the use of taffeta gloves or painting the hands with almond meal or flour, keeping the sick person and the sickroom clean and maintaining one's personal hygiene.

The second section of the book describes the environmental considerations of the sickroom. In this section, Fodéré again stresses the need for good ventilation and cleanliness and provides guidance on sickroom layout (e.g., positioning the bed so that the nurse can readily access the patient), how nurses can assist patients with their activities of daily living (e.g., mobilisation techniques, dressing the patient and assisting with elimination and personal hygiene) and the 'evacuations' (i.e., faeces, phlegm, sweat and urine) that must be observed by the nurse.

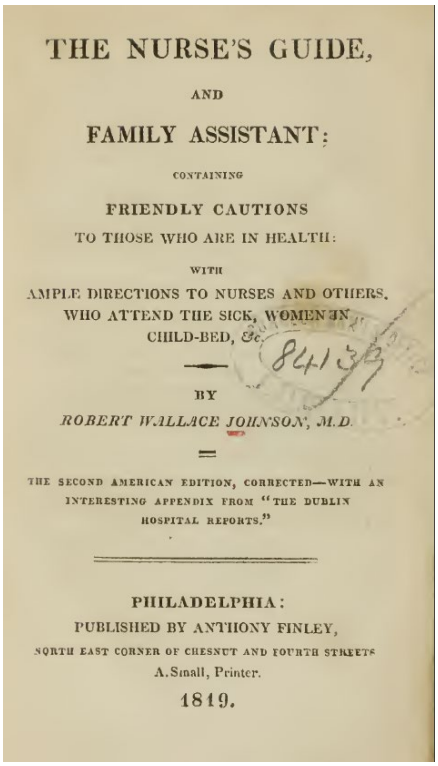
Medicinal diets and remedies are presented in the third section of the book. This section details the nurse's role in the preparation and administration of such remedies. Techniques on how to overcome a patient's reluctance to ingest a medicament are described, including limiting the

patient's ability to view or smell the remedy prior to administration and using a spoon to hold open the mouth and elicit a gag reflex in the 'difficult patient' (p. 59). Medicinal recipes, principles of medicament administration and specialised procedures (e.g., leeching, undertaking medicinal baths and the treatment of abscesses) are also presented.

The final section of Fodéré's manual describes nursing care for specific patient groups. The first chapter of this section describes care of the dying and the treatment of emergent situations, including the management of patients with an altered level of consciousness (e.g., those with delirium or seizure disorders); accidental injury (e.g., fractures and haemorrhage) or environmental exposure (e.g., hypothermia). The following section describes care of the woman in childbirth. However, Fodéré emphasises the need for the nurse to follow the advice of the accoucheur or midwife in terms of clinical care. Consequently, only superficial perinatal advice is provided, such as the nurse needing to prevent visitors from disrupting the new mother and keeping the postpartum woman in bed until directed by the doctor because it is 'dangerous' to stand or mobilise (p. 99). The final chapter of this section provides an overview of the care of a newborn, including how to bathe, feed, clothe and calm the infant (e.g., singing and cradling are recommended).

Fodéré's manual is less sophisticated than some of the earlier works presented, such as Carrère or Greiner's texts. This lack of sophistication is a result of Fodéré's focus on the comportment of the nurse and environmental cares rather than the technical aspects of nursing practice. Nonetheless, this change in focus is congruent with other nursing manuals written in this period.

Johnson, R. W. (1819). *The nurse's guide, and family assistant: Containing friendly cautions to those who are in health: With ample directions to nurses and others who attend the sick, women in child-bed, &c.* (2nd US ed.). Philadelphia, PA: Anthony Finley. Retrieved from https://archive.org/details/2559016R.nlm.nih.gov/page/n4/mode/2up



THE NURSE'S GUIDE,

AND

FAMILY ASSISTANT:

CONTAINING

FRIENDLY CAUTIONS

TO THOSE WHO ARE IN HEALTH:

WITH

AMPLE DIRECTIONS TO NURSES AND OTHERS,
WHO ATTEND THE SICK, WOMEN IN
CHILD-BED, &c.

BY

ROBERT WALLACE JOHNSON, M.D.

THE SECOND AMERICAN EDITION, CORRECTED—WITH AN INTERESTING APPENDIX FROM "THE DUBLIN HOSPITAL REPORTS."

PHILADELPHIA:
PUBLISHED BY ANTHONY FINLEY,
NORTH EAST CORNER OF CHESNUT AND FOURTH STREETS
A. Small, Printer.
1819.

Figure 5.13: Title page of *The Nurse's Guide and Family Assistant* (1819)

The Nurse's Guide is the second US edition of a book describing the qualities and duties of the sick nurse.[53] The intended audience of the guide were the heads of families, sick nurses and the medical profession. It contains nine chapters and an appendix that details additional nursing cares for fever patients. In the first three chapters, Johnson provides general health advice on personal hygiene, grooming and diet.

Chapter 4—'Directions for Nurses'—describes the preferred qualities and demeanours of a nurse, including their need to be sober, honest, have an even temperament, cheerful disposition

[53] A digitised copy of the first edition (1793) text was unable to be located. During this era, the term 'sick nurse' was occasionally used to denote a nurse who cared for the sick. Using this term helped to differentiate this form of nursing work from others such as the role of the 'monthly nurse'—a woman who cared for the mother and infant in the month following childbirth (Young, 2004).

and fast-pace. The nurse is also cautioned to avoid 'idle chitchat, disagreeable subjects, or any thing [sic] that can occasion sudden surprise' because such actions can overshadow 'every other qualification' (p. 59).

The remaining chapters outline the environmental considerations of the sick chamber; diet preparations and medication administration. In Chapter 5—'Of Things to be Observed Relating to the Sick Chamber'—the author's beliefs that miasmas were a source of infection are evident in the detailed descriptions provided of the principles of air ventilation and the removal of 'foul air', including the need for nurses to follow physician's orders. Johnson also advises that the nurse may provide 'a daily change of roses and some other herbs' to improve the air quality and comfort of the patient (p. 67). The following two chapters further reinforce the need to rid the room of 'stagnated air'—which can achieved through the use of high bed posts because these 'allow an ascension of foul air' (p. 70) and avoidance of drawing curtains because 'this is a pernicious habit' that traps 'contaminated' air (p. 73).

Meal preparation for the patient was also deemed an essential role of the nurse—the nurse 'ought to be the cook' (p. 89). Chapter 7 provides over 50 recipes that the nurse can prepare, ranging from basic teas to more elaborate concoctions such as a 'pigeon stewed in paste' (puff pastry; p. 126). Despite the breadth of recipes provided, Johnson largely fails to elaborate on the clinical indications for such meals and when additional advice is provided, it is vague. For example, in the eel broth recipe, the reader was informed that 'The Physician will direct when it is proper to be taken' (p. 122).

Chapter 9—'Administering Medicines'—stresses the importance of adhering to regimens ordered by the physician. This chapter provides reasons that nurses may be reluctant to administer medications, including the patient experiencing anorexia, nausea, vomiting and 'acidities, or other bad humors' (p. 157). Yet, it provides no advice for how the nurse can

address these inflictions. Instead, these disorders are explained using humoralism. For example, a failure to observe a therapeutic effect of a drug is attributed to the patient being 'out of humor' (p. 159) and vomiting may result from 'morbid humors accumulating' in the stomach (p. 155). Johnson includes no detail on the procedural aspects of medication administration except for a small section on the use of clysters because nurses were required to be 'very expert' in this task (p. 157).[54]

The appendix of this book is an excerpt from a report of the Hardwicke Fever Hospital that was written by Dr J. Cheyne. In contrast to the main body of the text, this appendix provides useful information regarding:

- the hospital's infection prevention and control measures (e.g., washing patients upon admittance and laundering contaminated linen)
- the monitoring of the general condition of the patient
- performance of focused assessments, such as abdominal and integumentary assessment
- management of the delirious patient (e.g., while the nurse could use a stern voice, they were not permitted to restrain the patient)
- the information to be reported to the physician
- instructions for end-of-life care.

These descriptions are accompanied by practical rationales to guide the nurse.

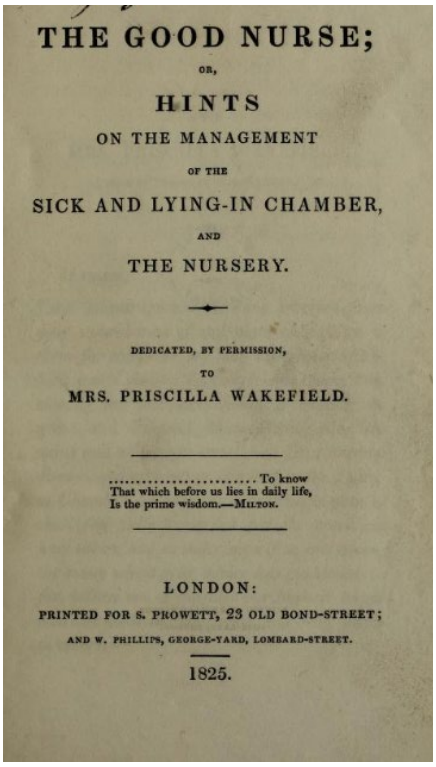
This book presents two exemplars of how nurses were instructed by nineteenth-century doctors. The main body of the text provides superficial descriptors of core nursing duties but largely fails to explain how and why these tasks should be performed—it reinforces the handmaiden role. In contrast, the appendix provides a comprehensive explanation of nursing tasks. It is clear

[54] Clyster is an archaic term for enema.

in Cheyne's explanations that while the nurse was subservient to her medical colleagues, the nurse was trusted to perform more complex skills, such as physical assessment and engagement in clinical reasoning.[55]

[55] Cheyne includes instructions such as 'When the nurse perceives any sudden increase of illness, she must …' (as cited in Johnson, 1819, p. 177).

Hanbury, E. B. (1825). *The good nurse; or, hints on the management of the sick and lying-in chamber, and the nursery*. London, England: S. Prowett & W. Phillips. Retrieved from https://archive.org/details/b29338670/page/n3/mode/2up



THE GOOD NURSE;

OR,

HINTS

ON THE MANAGEMENT

OF THE

SICK AND LYING-IN CHAMBER,

AND

THE NURSERY.

DEDICATED, BY PERMISSION,

TO

MRS. PRISCILLA WAKEFIELD.

..... To know
That which before us lies in daily life,
Is the prime wisdom.—MILTON.

LONDON:

PRINTED FOR S. PROWETT, 23 OLD BOND-STREET;

AND W. PHILLIPS, GEORGE-YARD, LOMBARD-STREET.

1825.

Figure 5.14: Title page of *The Good Nurse* (1825)

In this 251-page book, Hanbury provides an overview for the best methods of conducting a sick and lying-in chamber, which are cited as equally important as medical treatments in restoring the health of the infirmed. Eighteen of the 47 chapters focus on nursing care of the sick, including discussions regarding the attributes and qualities of the nurse, preparation and maintenance of the sick chamber environment, diet and fluid management and promotion of sleep.

Hanbury's discussions about the qualities of a 'good nurse' focus on their aesthetics and temperament as opposed to their skills or education standard. For example, according to Hanbury, a 'good nurse' should have 'good teeth', refrain from wearing 'trims and curls' because these are 'troublesome and unbecoming' and avoid fashionable clothes because these

'require much leisure for dressing' and are potential health risks (pp. 6–7).[56] Personality traits, such as possessing an even temperament, discretion, a kind demeanour and honesty were all described as important qualities of the 'good nurse'.

The nursing interventions described in this book predominantly focus on ensuring the patient was nursed in a clean and low-stimulus environment to promote sleep. The descriptions of procedural care are superficial, repetitious and frequently linked to the comportment of the nurse rather than scientific rationales. When Hanbury did attempt to include 'science' in his rationales, it is evident that much of his suggested procedures were based on quackery, even though he recommended the nurse be unbiased by 'ignorant superstitions' (p. 5). Examples of quackery in this book include his endorsement of the fever-reducing powers of Dr James's powder.[57]

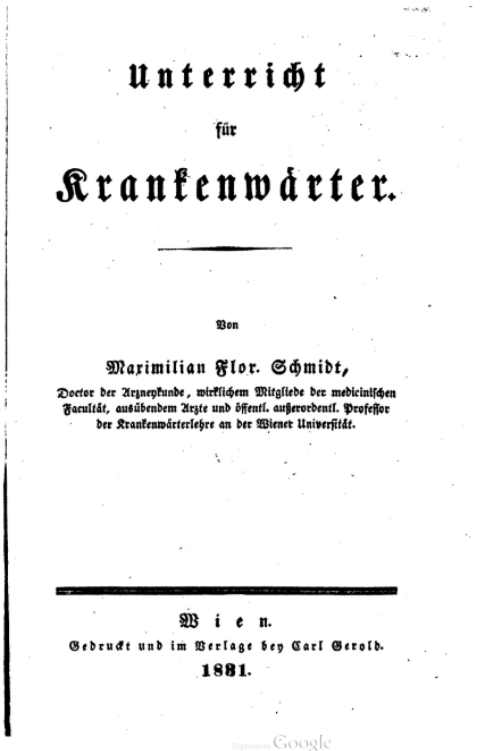
The reader is informed throughout the text that the nurse needs to abide by the physician, regardless of the nurse's education or experience. The nurse's subservience to the physician is reinforced through regular references to nurses' general ignorance, the potential patient harm that can result from 'a silly ignorant woman' and the physician's anxiety when leaving a patient in attendance with an injudicious nurse (p. 34). This distrust of nurses is further evidenced by the title of Chapter 4—'On Deceiving the Physician'. The opening paragraph of this chapter explains that dishonesty is 'frequently practised [by nurses] in the sick chamber' (p. 19). The reader is provided with a descriptors of different types of nurse deception, including the omission of medications, unapproved changes to diet regimens and the failure to report mistakes or incidents—acts viewed as 'mean … highly criminal … contemptible … [and] reprehensible'

[56] Hanbury dedicates an entire chapter of the text to the health risks of corsets and cravats. The former is also sporadically mentioned throughout the book.
[57] First introduced in 1746, Dr James's fever powder was used to treat a range of disorders including fever, rheumatism and gout. Despite being used until the twentieth century, the efficacy of the powder was a contentious area in medicine because its use was attributable to several deaths (Welsh, 2010).

(p. 21). Such descriptors in *The Good Nurse* paradoxically reinforce the nineteenth-century stereotypes of the ignorant nurse as opposed to the nurse as a nurturer or promoter of health.[58]

[58] This belief is further evidenced by Hanbury's endorsement of the consumption of alcohol by on-duty nurses.

Schmidt, M. F. (1831). *Unterricht für krankenwärter* [*Lessons for nurses*]. Vienna, Austria: Carl Gerold. Retrieved from https://books.google.com.au/books?id=Nb5eAAAAcAAJ&printsec=frontcover&dq=Maximilian+Florian+Schmidt&hl=en&sa=X&ved=0ahUKEwjo5bGB_f3gAhUOeisKHZi2BBAQ6AEIKzAA#v=onepage&q=Maximilian%20Florian%20Schmidt&f=false



Unterricht

für

Krankenwärter.

Von

Maximilian Flor. Schmidt,

Doctor der Arzneykunde, wirklichem Mitgliede der medicinischen Facultät, ausübendem Arzte und öffentl. außerordentl. Professor der Krankenwärterlehre an der Wiener Universität.

Wien.

Gedruckt und im Verlage bey Carl Gerold.

1831.

Figure 5.15: Title page of *Unterricht für Krankenwärter* (1831)

Maximilian Florian Schmidt (1784–1846) was a Czech-born Viennese physician who was a strong advocate for the introduction of formalised nursing training. Schmidt wrote this 222-page manual for nurses after witnessing ‘countless abominations, frequent misfortunes, and sometimes rapid deaths’ that resulted from nurse ignorance, ‘silly habits’ or ‘ridiculous prejudices’ (p. v). In the preface, Schmidt highlights the need for this manual to overcome such negligence and endorses the establishment of more nursing schools across Austria and Germany. Schmidt indicates his own nursing school was established at Vienna University in 1812 and conducted regular assessments of its pupils, including requirements to submit reports about specific conditions following lectures and sit practical exams. The prospective nurse was also required to undertake a public exam prior to, and upon passing, a practising certificate.

The book consists of 12 chapters that outline the fundamental nursing activities of the period. In the first chapter, Schmidt acknowledges that 'not everyone is suitable for this important and extremely difficult business' of being a nurse (p. 1). Therefore, potential nurses were expected to possess certain physical qualities, such as having a healthy and strong body that was capable of working day and night shifts and the heavy lifting required in nursing. Personal cleanliness was also a necessity to ensure the nurse's odour did not offend the patient. A middle-aged nurse was also desirable over younger or older nurses because their bodies were thought to best tolerate the physical demands of nursing. Moral qualities of the nurse included honesty, truthfulness, sobriety, kind-heartedness, discretion and attentiveness—the nurse be 'attentive to the patient, his environment and the doctor' (p.2). Literacy was also a desirable quality to ensure nurses could document and adhere to doctors' orders, read medication labels and follow directions for use and document the patients' symptoms in the doctor's absence.

The second and third chapters of the book detail the physical features and layout of the sickroom. Necessary features of the sickroom include maintenance of a constant room temperature of 14 to 17° Reaumur (or as per the doctor's discretion),[59] an absence of pictures, location in a quiet part of the house, high ceilings to accommodate accumulated exhalations and adequate length and width to conduct mobilisation. Schmidt also details the equipment that should be used to equip the sickroom, including a bed, the patient's medicines, chamber-pots, urinal, nightstand, washbasin, spittoon, a syringe and associated paraphernalia, bowls, glasses, cups with straws, a clock, boiled water, nightwear, basic utensils and paper. The paper was used by the nurse to document the patient's progress for the doctor. However, Schmidt cautions his audience about reading such information to the patient because it could cause unnecessary

[59] 17.5 to 21.25°C.

distress. Interestingly, Schmidt also recommends that sickroom curtains should be preferably green and pattern-free. However, he failed to include a rationale for this recommendation.

The next chapter summarises Schmidt's six essential elements to improve and/or sustain life: pure air, food and drinks, movement, passions of the soul [intense emotions], sleep and natural evacuations. The reader is informed on nursing interventions that could restore or maintain each essential element. For example, the nurse could avoid inducing the patient's 'passions' by refraining from engaging in gossip or discussing bad news in front of the patient; ensuring one's face remained 'serene and content'; amusing the patient with anecdotes or reading; or instilling hope in the patient (p. 39). The reader is also cautioned about allowing the last sacraments to take place or discussing the patient's will while the patient is conscious because this could 'terrify the patient, accelerate death, or even to kill with a disease whose outcome is not faithful' (p 39). Instead, Schmidt urges that the patient's imminent death be concealed from them.

Chapter 5 provides an overview of medicine use. It is divided into two sections—internal and external remedies. Internal remedies described include various broths, beverages (e.g., juices, boiled water, lemonade and orangeade), emulsions, mixtures, syrups, suspensions, powders and pills. External remedies described include eye drops, mouth gargles, liniments, enemas, suppositories, vesicatories, bloodletting, leeching, dressings, poultices, medicinal baths injections and 'surgical operations' (p. 66). While recipes for basic remedies are explained in Chapter 11, Schmidt asserts that a skilled nurse needs to know how to prepare such remedies and is required to understand the indications and techniques for administering common remedies. Patient positioning, equipment, temperature of medicament, variations and possible contraindications are explained to the reader in each subsection of this chapter. For more complex remedies, such as bloodletting, Schmidt urges the nurse to learn not only through his written instruction but also through practical experience.

The sixth chapter describes specific treatment regimens for different disease processes. In the opening paragraph of this chapter, Schmidt asserts:

> Those who know only what has been taught in the previous five chapters have not yet been sufficiently instructed, are not yet entitled to the worthy name of a nurse. You must also know how the patients are to be treated in the light of the disease in which they lie. (p.114)

The information in this chapter provides guidance of the signs and symptoms, causes and treatment of the 'principal' diseases (p. 114). Regardless of the disease process, Schmidt recommends that the nurse monitor and be able to report on the patient's:

- respiratory pattern; pulse (rate and characteristics)
- urinary elimination pattern (colour, presence of stones or particles and incontinence)
- faecal elimination pattern (frequency, formation and any unusual characteristics—blood, worms or incontinence)
- hyperactive bowel sounds
- abnormal skin conditions around the anus (smallpox, tumours or ulcers)
- expectoration (ease and appearance)
- fever characteristics (e.g., hot, rigours, clamminess, dry tongue or thirsty)
- rash, epistaxis or other bleeding
- sleep pattern (length of sleep, and presence of parasomnias such as bruxism and sleep-talking)
- presence of tremors and/or pain.

Schmidt believed the educated nurse should keep notes of all these phenomena to present them daily to the physician. He provides additional information about the 'principal' diseases—fever, inflammatory diseases, nervous diseases (e.g., seizures, syncope, hysteria and coma),

haemorrhage, ‘serous outflows’ (diarrhoea) and respiratory disorders (e.g., pulmonary oedema) (p. 133).

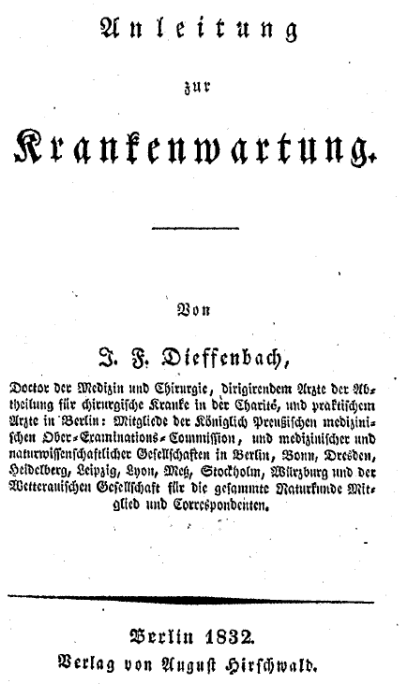
The next four chapters provide an overview of the nurse’s role in supporting special populations—the pregnant woman during labour, newborns, the dying and those who have entered the convalescent stage of their recovery. For Schmidt, the convalescence period commenced when:

> The fever subsides, the appetite returns, the thirst quenches, the pain subsides, the functions are put into the previous state; the pulse and the breath are naturally present, the [person’s] strength and sleep return. (p. 166)

Nursing cares for the convalescing patient include preparing small, soft diet meals (e.g., eggs, soups or pigeon); monitoring drinking—pure beer or wine were permitted, but only if the patient had not sinned; overseeing the ordered exercise regimen—walking and horseriding were deemed ‘generally good exercises’ (p. 171); and offering diversional activities—‘well-chosen books’, music and happy visitors were approved activities (p. 177).

General principles for keeping the nurse healthy are presented in the final chapter. These principles are similar to those offered by earlier authors such as Carrère, Serain and Greiner, and focus on the nurse’s diet, air quality and frequent personal hygiene. This text provides an important glimpse into the expected standards of nursing care in Germany in the 1830s.

Dieffenbach, J. F. (1832). *Anleitung zur krankenwartung* [*Instructions for nursing*]. Berlin, Germany: A. Hirschwald. Retrieved from https://epub.ub.uni-muenchen.de/10656/1/8Wibmer259.pdf



Anleitung

zur

Krankenwartung.

Von

J. F. Dieffenbach,

Doctor der Medizin und Chirurgie, dirigirendem Arzte der Abtheilung für chirurgische Kranke in der Charité, und praktischem Arzte in Berlin: Mitgliede der Königlich Preußischen medizinischen Ober-Examinations-Commission, und medizinischer und naturwissenschaftlicher Gesellschaften in Berlin, Bonn, Dresden, Heidelberg, Leipzig, Lyon, Metz, Stockholm, Würzburg und der Wetterauischen Gesellschaft für die gesammte Naturkunde Mitglied und Correspondenten.

Berlin 1832.
Verlag von August Hirschwald.

Figure 5.16: Title page of *Anleitung zur Krankenwartung* (1832)

Johann Friedrich Dieffenbach (1792–1847) was a well-regarded German physician and surgeon.[60] In 1832, Dieffenbach established the first permanent nursing school at Berlin's Charité Hospital and wrote *Anleitung zur Krankenwartung. Anleitung* was written because nurses needed to be trained to help care for patients affected by 'current events' (p. 2).[61] Dieffenbach perceived nursing as a 'noble profession' and the care of the sick as 'a serious business' (p. 2).

[60] He is regarded as a pioneer of plastic and reconstructive surgery (e.g., rhinoplasties) and orthopaedics (e.g., subcutaneous tenotomies; Hernigou, 2016; Mau & Biemer, 1994). According to Wolff and Wolff (1995), Dieffenbach received his professorship not because of surgical talents but because of his improvements in nursing education.

[61] In 1831–1832, Berlin experienced a cholera epidemic (Mau & Biemer, 1994).

This 182-page book details the routine activities of the nurse. Five central tenets are found in the book: qualities of the nurse and hospital, environmental care considerations, nutrition and hydration, patient hygiene and the administration of remedies.

Like other books of the period, Dieffenbach first describes the necessary qualities of the nurse. These qualities include physical characteristics, such as the need to be healthy, clean, have a gentle voice (e.g., rough voices were 'unbearable'; p.18) and intact senses (e.g., anosmia could result in the nurse failing to detect patient incontinence) and be free from disfigurement (a disfigurement particularly on the face could scare the patient and aggravate their illness), rashes, halitosis and bromodosis (smelly feet). Age limitations are also recommended by Dieffenbach—females could be a nurse between 25 and 50 years of age, whereas males could practice between the ages of 30 and 50 years. Dieffenbach believed these age groups had the necessary physical strength to lift and carry patients while avoiding the vices of other age groups. For example, Dieffenbach viewed older women as gossipy, forgetful and stubborn. Dieffenbach recommended that potential nurses have attributes such as selflessness, faithfulness, quietness, discretion (including the ability to disguise disgust), discipline, piety (without being part of a religious order), compassion and attentiveness. The nurse also needed to comply with the doctor's orders 'with punctuality and conscientiousness' and be literate (p. 27). The minimum standard for literacy was the ability to read and understand medication orders; being a 'pleasant reader' for the patient was deemed beneficial (pp. 22–23).

Four chapters of the book detail the general environmental cares that should be provided by the nurse: ensuring adequate air quality and appropriate heating, lighting the sickroom and using fumigations. In these chapters, Dieffenbach presents his views on architectural improvements that some hospitals had implemented, such as central heating and improved ventilation (e.g., via the use of air outlets within walls and chimney positioning). However, Dieffenbach also

maintained that simple nursing interventions, such as opening windows and doors, were just as effective in increasing airflow in a sickroom. Like other authors of the period, Dieffenbach recommends the placement of a wall thermometer so that the sickroom's temperature could be monitored and adjusted according to doctor's orders. Additional advice is provided on equipping the sickroom (e.g., ensuring a sofa or chaise is in the room so that the patient can spend time out of bed), appropriate bed attire (i.e., underwear was not to be worn) and the need for hygiene care. Providing hygienic care to the patient was another core duty of the nurse; he believed that patients housed in the 'richest room in silken sheets' were fallible to the risks of lice infestation (p. 48).

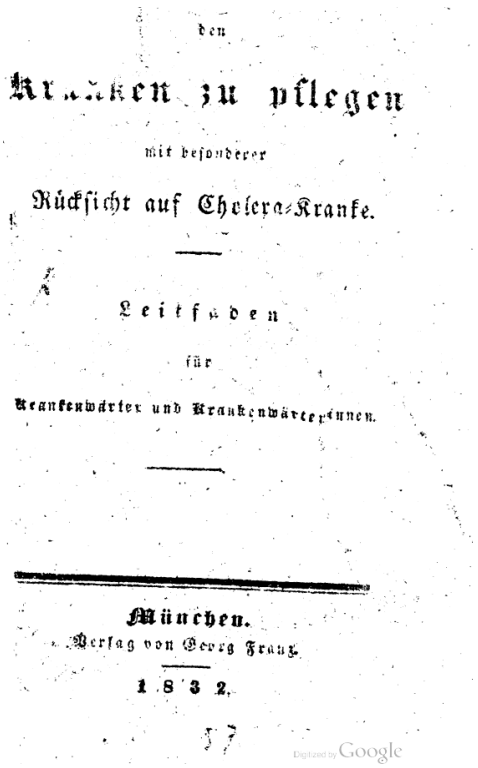
Medicinal remedies are described in the last five chapters of the book. In this section, various remedies are discussed, including medicinal baths, topical agents (liniments, poultices, plasters and wraps), gargles and enema administration. Unlike most other books of this period, Dieffenbach provides only a small section on the administration of food and drinks. His rationale for this was: 'In a book about healthcare, it cannot be about what the patient should eat and drink, because only the doctor can make that order' (p. 39). Consequently, this book does not include a recipe section. Instead, it provides advice on how to assist the patient to eat comfortably (e.g., small sips/mouthfuls, patience and using pillows to prop up the patient into an upright position). Dieffenbach viewed eating in bed as 'very uncomfortable and offensive', so he urged the nurse to make it is as comfortable for the patient as possible (p. 40). Techniques to improve this experience included the provision of a napkin-adorned tray/board placed across the lap of the patient.

Dieffenbach's version of *Anleitung* is an important seminal German nursing text that was used to guide Theodor's Fliedner's training of the Kaiserswerth deaconesses (Nolte, 2008).[62]

[62] In 1851, Nightingale spent three months at the Institute for Deaconesses in Kaiserswerth (Seymer, 1951).

Nonetheless, this analysis has revealed that the text's content is comparable yet less sophisticated than those of his earlier German counterparts (e.g., Greiner and Schmidt). Nutting and Dock (1907a) shared this belief in their landmark text. However, they believed 'Many procedures are described in a way that suitable only for medical students, and the writer evidently had no conception on how to teach nurses' (p. 539). Nutting and Dock's analysis may have been influenced by Dieffenbach's writing style, which was verbose and repetitive, and his possible classist explanations. For example, he viewed homeless people as resistant to cleanliness and the 'most disgusting business of a hospital' (p. 49).

Martin, A. (1832). *Die kunst, den kranken, zu pflegen mit besonderer rücksicht auf cholera-kranke: Leitfaden für krankenwärter* [*The art of caring for the sick, with special regard to cholera patients: Guide for nurses*]. Munich, Germany: Georg Franz. Retrieved from https://books.google.com.au/books?id=SJA_AAAAcAAJ&pg=PA7&lpg=PA7&dq=Die+Kunst,+den+Kranken+zu+Pflegen&source=bl&ots=xmJb1KDvAd&sig=ACfU3U3mq



den

Kranken zu pflegen

mit besonderer

Rücksicht auf Cholera-Kranke.

Leitfaden

für

Krankenwärter und Krankenwärterinnen.

München.

Verlag von Georg Franz.

1832.

Figure 5.17: Title page of *Die Kunst, den Kranken, zu Pflegen mit Besonderer Rücksicht auf Cholera-Kranke* (1832)

The purpose of this 64-page instructional guide was to the detail the nursing care required by the patient with cholera. Despite this specific purpose, the guide mostly contains similar advice to that of Schmidt (1831). The guide opens with a summary of the preferred attributes of the nurse. While it mentions conventional traits such as discretion and patience, Martin also specifies the need for the nurse to be healthy and free from fear about contracting certain diseases. Martin also indicates that the nurse should be able to read and write German (typeset and handwritten), tell the time and ideally read Latin-German writing.

Chapter 1 explains the interventions to protect against contagion and the spread of cholera. These interventions focus on maintaining a healthy sickroom environment through the removal of miasmas (e.g., avoiding overcrowding and the prompt removal of soiled linen) and general health advice for the nurse. This health advice includes consuming a diet of readily digestible, fresh foods; staying warm (especially feet and legs); obtaining adequate sleep; and maintaining good hygiene practices (e.g., bathing, frequent mouth care and combing one's hair with cold water several times a day). The nurse's ability to remain courageous and cheerful when caring for patients with cholera was also considered a foremost protective mechanism against cholera.

Martin's explanations of the nursing care required for patients with cholera are comparable to that provided to non-infected patients. These cares included administering prescribed medicines, performing frequent hygiene cares and repositioning the patient at regular intervals. Basic infection control principles are also advised, such as the nurse performing hand hygiene after the touching the patient and ensuring the patient did not touch their 'diseased part' (the perineum; p. 24). The latter could be achieved by keeping the patient's nails short and clean. Adhering to the physician's orders about remedies and other cares was also a necessary nursing consideration. Routine remedies used in the treatment of cholera included pills, powders, tisanes and other drinks (e.g., lemonade and almond milk), enemas, poultices, baths, leeching and vesicatories. The nurse was also required to undertake and record a series of special observations on the patient. These observations included noting the patient's: breathing pattern, sputum production, fluid status (i.e., fluid consumption and any signs of dehydration, such as a dry, crusted tongue), gastrointestinal symptoms (audible bowel sounds and stool characteristics/problems such as incontinence and whether 'blood, pus or worms etc.' were present; p. 53), urinary problems (e.g., dysuria or incontinence); skin abnormalities (e.g., the presence of rashes, ulcers or tumours) and sleep patterns. Additionally, the nurse was expected

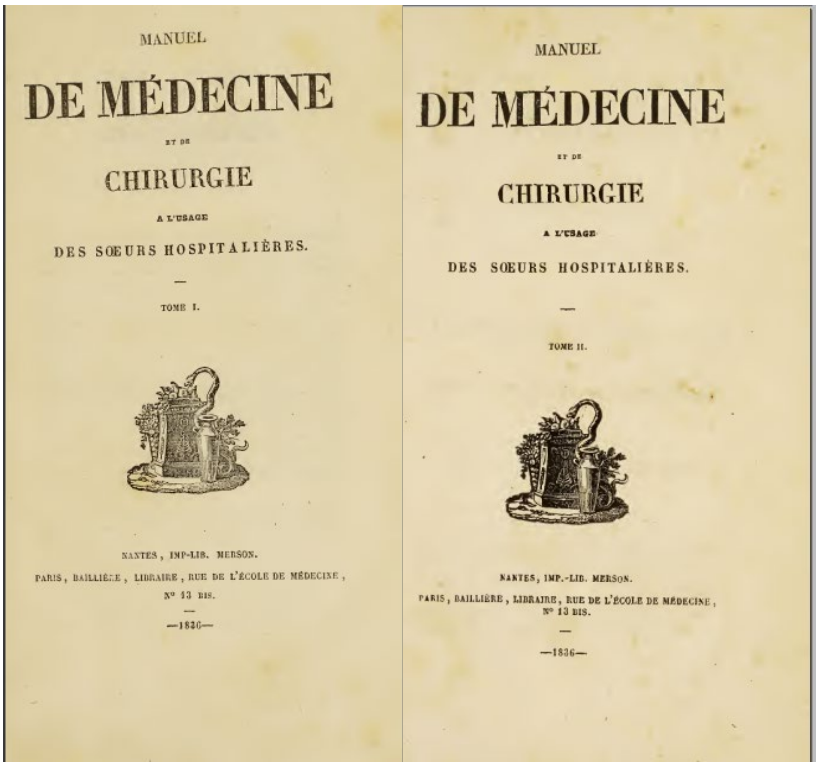
to note if the patient was in pain or suffering from fever. Consequently, these observations closely resemble those in Schmidt's earlier book.

In cases in which the patient had severe vomiting or diarrhoea, the nurse was required to keep the room, bed and drinks of the sick 'moderately warm' (p 56). Warming the patient was achieved by ensuring the patient was dressed in warm clothes, applying hot water bottles, stimulating the skin by rubbing and brushing it, and offering warm beverages and broths.

As well as providing general guidelines, the treatise also provides recommendations for the care of particular patient groups. The population groups discussed include pregnant and postpartum women, infants, convalescing patients, the dying and those living with a mental illness. In terms of care for the person with a mental illness, Martin advises that nurses should conduct themselves with patience and steadfastness (so they are less upset or sensitive to the patient's threats or allegations), protect the patient from possible self-harm and remain careful not to indulge the patient's sexual desire.

Despite Martin indicating this book was intended to provide the specific guidelines for care of the patient with cholera, much of the advice within the book is akin to the routine nursing care of the period. Consequently, most of Martin's ideas presented within this treatise are essentially an abridged synopsis of earlier nursing manuals (especially Schmidt's *Unterricht für Krankenwärter*).

Anonymous. (1836). *Manuel de medecine et de chirurgie a l'usage des soeurs hospitalieres* [*Manual of medicine and surgery for the use of hospital sisters*] (Vols 1 and 2). Paris, France: Baillere. Retrieved from https://archive.org/details/b28750457_0002/page/n4/mode/2up


MANUEL

DE MÉDECINE

ET DE

CHIRURGIE

A L'USAGE

DES SŒURS HOSPITALIÈRES.

TOME I.

NANTES, IMP-LIB. MERSON.

PARIS, BAILLIÈRE, LIBRAIRE, RUE DE L'ÉCOLE DE MÉDECINE, Nº 13 BIS.

—1836—

MANUEL

DE MÉDECINE

ET DE

CHIRURGIE

A L'USAGE

DES SŒURS HOSPITALIÈRES.

TOME II.

NANTES, IMP.-LIB. MERSON.

PARIS, BAILLIÈRE, LIBRAIRE, RUE DE L'ÉCOLE DE MÉDECINE, Nº 13 BIS.

—1836—

Figure 5.18: Title pages of *Manuel de Medecine et de Chirurgie a L'usage des Soeurs Hospitalieres* (1836)

This manual was produced as a handbook to inform a group of religious sisters on the fundamental aspects of medicine and surgery.[63] It comprises two volumes, the first being 459 pages long and the second being 770 pages. The first volume introduces the four core paradigms of medicine: anatomy, physiology, pathology and therapeutics (medications). Volume 2 uses these fundamental principles to explain diagnosis and treatment of various disease processes.

The preface indicates that the sisters recognised such a manual was needed to instruct novitiates on the importance of 'uniformity' during the 'art of healing' (pp. i–ii). Originally, the sisters

[63] The handbook's content does not clearly state who its intended audience was; however, given its origin (French) and the period in which it is written, the sisters to which it refers would likely have been the Sisters of Charity.

attempted to write the manual themselves, but realising they lacked the knowledge to adequately cover the breadth of content, they sought the assistance of an anonymous doctor whose 'religious principles [were] known' (p. ii). The language used in the manual provides a 'sound doctrine without departing from the simplicity necessary to stay within the reach of the people' it was intended to instruct (p. ii).

The anatomy and physiology sections of Volume 1 provide a comprehensive overview of structures and functions of the body. The descriptions provided are simply presented but still use correct terminology. For example, when discussing the respiratory system, the author explains:

> The lungs have a communication with the back of the mouth by the trachea, [which is] half-cartilage, half-membranous, it starts at the neck at the lower larynx and then divides into two branches that take the name of bronchi. (p. 44)

The pathology section introduces the reader to concepts such as aetiology, symptomology and risk factors for disease development. While many of these explanations regarding disease development are comparable to contemporary science (e.g., risk factors such as age, gender, hereditary factors, congenital conditions and occupational hazards are described), other explanations remain embedded in humoralism. For example, a person's temperament was still associated with predisposition to a certain number of diseases. Accordingly, people with a blood temperament were more likely to develop 'inflammatory conditions, violent fevers, active haemorrhages, [and] blood congestion of the brain and lungs' (p. 92).

This volume also describes how to interpret vital signs findings. The respiratory rate for an adult was noted as being 20 breaths per minute (p. 74), for temperature 'the natural warmth of

the human body is, indoors, from 30 to 32 degrees [Reaumur]' (p. 66)[64] and the pulse rate was described as between '120 to 140 beats per minute [in newborns and] … between 65 to 75 beats per minute in adulthood' (p. 173). Possible explanations for abnormal findings are also provided, such as in the case of variations in pulse rate:

> The number of pulsations also increases after meals, exercise … [and] during pregnancy. In contrast, there are people whose pulse is very rare; we have seen [it in individuals] who although young, [being] only 50 and even 40 beats per minute. Exposure to cold often produces a similar phenomenon. (p. 174)

The final section of this volume is a 257-page pharmacopeia. Information on medicaments is grouped according to drug class (e.g., stimulants, narcotics, febrifuges [antipyretics] and expectorants). Each descriptor includes an overview of the medicament's therapeutic effect, use, preparation and possible side effects. These descriptions range from simple drugs such as coffee, which was used as a stimulant to 'facilitate digestion, increase pulse rate and awaken the intellect' and 'in cases of narcotic poisoning' (pp. 241–242) to more hazardous drugs such as 'sulphate of morphine' [morphine sulphate], which was used to 'cardialgias [angina] and in all other nerve pain whose intensity fatigues and agitates the patient' (p. 257).

A comprehensive collection of medical conditions is presented in Volume 2.[65] While the author had 'no intention of providing a complete treatise on pathology', he did want nurses to have 'sufficient knowledge' to suitably treat patients (p. 2). The information is presented in a systematic manner in which different types of fevers are first discussed before general discussions on managing phlegmasias, haemorrhages, neuroses and dropsy.[66] The next section

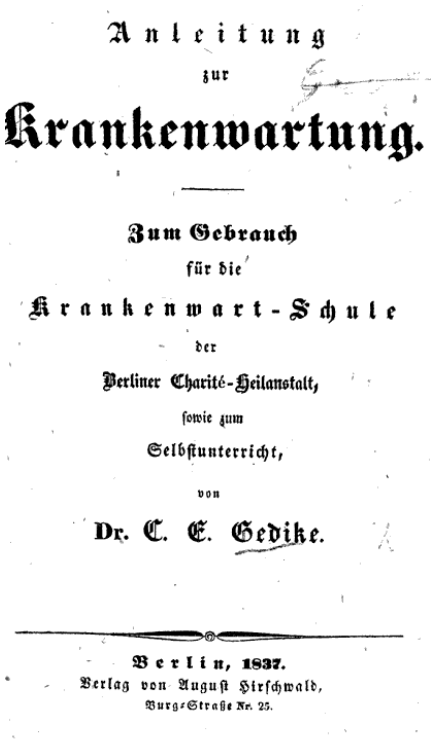
[64] This temperature equates to 37.5 to 40˚C.
[65] Over 150 conditions are presented.
[66] Phelmgasia is an archaic term used to denote inflammation, especially of internal organs. Bloodletting was a foremost treatment to reduce inflammation. Dropsy is an archaic term denoting oedema or third-spacing (e.g. ascites).

provides an overview on various skin conditions, including communicable diseases such as smallpox, scabies, measles and shingles before moving onto internal and external 'head diseases'—what we would now term neurological, eye, ear, nose and throat conditions. Cardiovascular and respiratory disorders are presented in the next section under the heading of 'chest diseases', prior to an overview of abdominal disorders. The following section addresses 'unclassifiable' disease processes, including 'gout, rheumatism, many neuroses' (p. 3). This section also presents health tips for sex workers, including information on menstruation and an overview of sexually transmissible diseases. The final section of the manual discusses care of various injuries and external conditions (e.g., bites, fractures and penetrating wounds).

Each condition is presented using a formulaic method of overview, cause, signs and symptoms and treatment methods. Despite evidence of an advanced understanding of anatomy and (patho)physiology for the period and the introduction of modern techniques (e.g., undertaking regular pulse assessments), many management strategies were influenced by humoralist principles. Consequently, purgatives, enemas, bloodletting and leeching were used as fundamental treatments for many conditions, regardless of their nature or cause.

While many recommended treatment regimens outlined in this manual are obsolete, the manual's layout and structure are comparable to contemporary medical-surgical nursing texts. Further, the level of detail in this manual implies that the nurses for whom it was intended were expected to have a wide breadth of knowledge, be able to detect changes in patient condition, prioritise clinical care and educate others on their condition and preventive health steps.

Gedike, C. E. (1837). *Anleitung zur krankenwartung* [*Instructions for nursing*]. Berlin, Germany: August Hirschwald. Retrieved from https://play.google.com/books/reader?id=jAllAAAAcAAJ&hl=en&pg=GBS.PR1



Anleitung
zur
Krankenwartung.

Zum Gebrauch
für die
Krankenwart-Schule
der
Berliner Charité-Heilanstalt,
sowie zum
Selbstunterricht,
von
Dr. C. E. Gedike.

Berlin, 1837.
Verlag von August Hirschwald,
Burg-Straße Nr. 25.

Figure 5.19: Title page of *Anleitung zur Krankenwartung* (1837)

Carl Emile Gedike (1797–1867) was a German doctor who assumed the theoretical instruction of the Royal Prussian nursing school at Berlin's Charité Hospital.[67] The nursing school was established in 1832, and at the time of publishing this version, 156 nursing students (47 males and 109 females) had been admitted into the five-month course.[68] Admittance to the course required the prospective student to be deemed appropriately aged, healthy and literate. The prospective student was also required to produce 'evidenced testimonies' that confirmed their 'previous moral performance' (p. ix). Upon completing the course, nursing students were required to sit an examination before being issued a certificate of achievement.[69]

[67] Gedike later became the director of the school in 1844, after taking over from Dieffenbach.
[68] The course initially ran for five months but was later decreased to two to three months (Nutting & Dock, 1907).
[69] This course and Gedike's version of *Anleitung* later became the blueprint for the introduction of standardised nursing across Germany (Wolff & Wolff, 1995).

This book is a revision and extension of Dieffenbach's 1832 text. In the preface, Gedike acknowledges Dieffenbach's work did not 'overestimate the real position of the nurse, as is so often in other works' (p. xv). However, he believed that some aspects in the original were missing, such as care of the pregnant woman and newborn. When Gedike took over authorship of this guide, he included the subtitle: *For the Nursing School of the Berlin-Charité Sanatorium and for Self-instruction*. Additional editions of the book were released in 1846 and 1854 (under the title of *Handbuch der Krankenwartung* [*Handbook of Nursing Care*]). The 1837 edition is 208 pages long and contains 32 chapters. A diverse range of topics is discussed, such as first aid techniques, care of the mentally ill and the way nurses should report information to the doctor.

Gedike believed the purpose of nursing was to relieve patient suffering and execute the order of the doctor. Throughout the text, Gedike asserts that even patients in their own home would be better served by trained nurses than cared for by relatives. To best provide such nursing care, Gedike states the nurse must possess certain physical and affective features. Many of these traits are similar to Dieffenbach's opinions (e.g., middle age, in good health, intact senses and obedient) but Gedike simplifies the rationales for why these qualities were desirable.

Gedike believed the nurse was required to be truthful in their communication with the doctor. Consequently, he dedicated a chapter of *Anleitung* to nurse–doctor communication because the nurse acted as a 'mediator between the doctor and patient' (p. 150). This chapter, despite discussing the need for candid nurse–doctor communication, presents the expected norms of such conversations. When the nurse was uncertain about how to answer a doctor's question, it was recommended that the nurse should remain silent rather than responding apprehensively. It was also 'entirely reprehensible' for a nurse to offer their own opinions about a patient's

diagnosis or disease aetiology because such behaviours shifted the nurse's attention from their foremost task—observation (p. 151).

Like Dieffenbach's edition of *Anleitung*, Gedike dedicated multiple sections of the manual to how the nurse should prepare and maintain the sickroom. Nursing considerations discussed include techniques to improve air quality, maintenance of the room temperature at 14–15 degrees Reaumur,[70] equipment, bed-making and a safe environment, such as securing medications away from the sickroom if the person had a mental illness to limit the risk of self-harm. The nurse also delegated cleaning tasks, sweeping the sickroom with a damp broom when the air was being refreshed and removing excrement and soiled linen from the room as soon as possible.

The following section of the manual describes nursing interventions designed to improve comfort and limit complications. These include an overview of hygienic cares, transfer techniques for immobile patients and strategies to limit pressure injury development (e.g., regular repositioning, placing 'leather wreaths' under heels and placing a 'soft-tanned dear skin' under the patient's back; pp. 123–124). Gedike also advises that nurses should first warm fresh clothes and linen prior to use to avoid the risk of chilling the patient.[71]

Two chapters are dedicated to food and drinks in this version of *Anleitung*. While Gedike agreed with Dieffenbach's caution that doctors should prescribe the patient's nutritional and fluid regimen, Gedike provides some general guidelines on both areas. For example, the nurse should search the hospital bed for possible unauthorised food concealment by the patient; the patient should eat and drink little and often; and medications must be withheld for one hour after meals.

[70] 17.5–18.75˚C

[71] This pre-warming of linen and clothes was accomplished using a bed-warming device. Bed-warming devices included using a heated brick, tin bed-warmer containers or jars filled with hot water or hot sand. Gedike warned of the dangers of accidentally burning the patient and the risk of jars exploding in the stove while warming.

A variety of recipes for medicinal drinks is provided, such as rice water, almond milk and apple water. Advice is also provided on the provision of wine and beer—Gedike indicates that red wine was better tolerated than white wine and 'a thick, well-fermented, not too fresh' beer was best for the sick (p. 46).

Medication administration is discussed at length by Gedike because this was 'one of the nurse's most important duties' (p. 46). Oral formulations discussed within the manual include tinctures, drops, powders, pills, syrups and herbal teas. Gedike explains why such formulations may be used and special considerations for their administration. Further, he details the more specialised medications—the emetics, laxatives and sweat-inducing drugs—before offering a lengthy discussion on the preparation and administration of enemas. This section details the procedural considerations for less common 'injections'—intra-pharyngeal, intranasal, intra-aural and intravaginal—and the application of external remedies, medicinal baths, poultices, hot and cold compresses, frictions and rubbings (liniments), various plasters and vesicatories (adhesives, mustard and Spanish fly patches).[72]

The nurse's responsibilities in specialised procedures—bloodletting, leeching and surgical procedures—are detailed in three chapters of the manual.[73] Each chapter provides an overview of the procedure and clearly explains the role of the nurse. For example, in the case of the leeching, Gedike observes that while it is a surgeon's role, the nurse must also understand how it is done so that they can troubleshoot any problems that may occur. In each of these chapters, Gedike stresses that the nurse should have all equipment necessary prior to the surgeon's arrival. He also describes the layout and set-up of the room for the procedure. Tips for post-

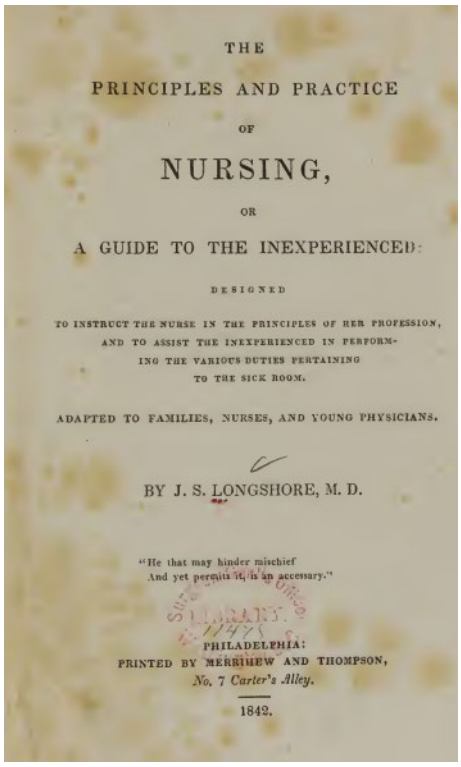
[73] The latter also describes the nurse's role in autopsies.

procedure cleaning are also suggested by Gedike, such as placing sand on the floor prior to surgery to help soak up the blood.

Six chapters of the manual provide advice on specific patient groups, including the dying, the infectious patient, women giving birth, the postpartum woman, the newborn the mentally ill patient. There is also a chapter on first aid management for conditions such as syncope, seizure, epistaxis, hanging and carbon monoxide poisoning resulting from the accumulation of smoke from open fires. This is the first manual that details an archaic form of mouth-to-mouth resuscitation—'air insufflation'—for people who had succumbed to carbon monoxide poisoning or who had attempted to hang themselves (p. 205).

Gedike's version of *Anleitung* is more sophisticated than Dieffenbach's 1832 edition. The practicalities of the nursing interventions are more articulate and reasoned than Dieffenbach's earlier advice. Nevertheless, such rationales were not underpinned by the same degree of anatomy and physiology present is some of the French and Spanish manuals.

Longshore, J. S. (1842). *The principles and practice of nursing, or a guide for the inexperienced*. Philadelphia, PA: Merrihew & Thompson. Retrieved from https://archive.org/details/68160720R.nlm.nih.gov/page/n4/mode/2up



THE

PRINCIPLES AND PRACTICE

OF

NURSING,

OR

A GUIDE TO THE INEXPERIENCED:

DESIGNED

TO INSTRUCT THE NURSE IN THE PRINCIPLES OF HER PROFESSION, AND TO ASSIST THE INEXPERIENCED IN PERFORMING THE VARIOUS DUTIES PERTAINING TO THE SICK ROOM.

ADAPTED TO FAMILIES, NURSES, AND YOUNG PHYSICIANS.

BY J. S. LONGSHORE, M. D.

"He that may hinder mischief
And yet permits it, is an accessary."

PHILADELPHIA:
PRINTED BY MERRIHEW AND THOMPSON,
No. 7 Carter's Alley.

1842.

Figure 5.20: Title page of *The Principles and Practice of Nursing* (1842)

This book provides an overview of the principles of nursing and management of the sickroom. The text is organised into four chapters—the first two discuss the qualities and duties of a general nurse and have been included in the analysis. In contrast, the final two chapters have been excluded from the study because they describe the qualities and duties of a monthly nurse; thus, they are midwifery focused. The main purpose of this text was to address the lack of preparedness of nurses entering the profession in both 'nature and education' (p. 2).

The first chapter details the desired qualities of the nurse, including the need for an even temper, discretion, good humour, general cleanliness and regular personal hygiene and to refrain from alcohol, tobacco and other drugs (e.g., opium). To complete their duties promptly and professionally, Longshore recommended that the nurse needed to be industrious, a trait demonstrated by assuming 'a light quick step in walking' in shoes that 'do not make a creaking

noise' (pp. 35–36). Longshore also identifies the need for nurses to possess a degree of higher-order thinking so that they could act without the presence of the doctor if the patient exhibited acute deterioration. He termed these qualities 'discrimination' (p. 21) and 'enlightened judgement' (p. 26).

The second chapter details the duties of the general nurse. The topics focus on improving patient comfort by assisting with activities of daily living, environmental modifications and ensuring the 'wants of the patient' are met (p. 44). Key tasks of the nurse described in this chapter include promoting rest and sleep via limiting any noise and visitor disturbances; attending to hygiene cares; repositioning and mobilisation; thermoregulation of the environment; promoting diet and fluids; preparing topical remedies and administering medication. Suggestions are also provided to improve the time-efficiency of the nurse.

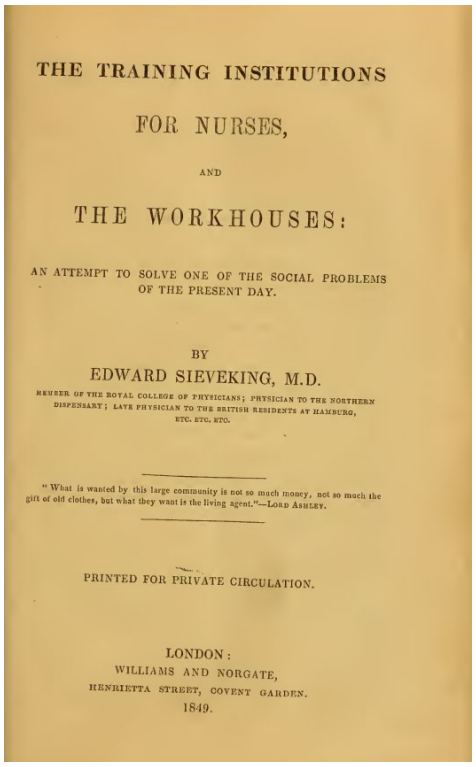
Promoting nutrition and fluids is a main discussion points of this chapter because it was viewed as 'one of the most important duties of the nurse' (p. 68). To emphasise its importance, an overview of the basic anatomy and physiology of the gastrointestinal tract is explained to the reader, before providing tips to improve a patient's nutritional intake and listing various medicinal recipes such as 'Calves' Feet Jelly' (p. 7) and 'Mustard Whey' (p. 86). Longshore also encourages the nurse to refrain from being overly officious in encouraging food and fluids because this can be 'very annoying and harrassing [sic], and tend to impede, rather than hasten her recovery' (p. 48).

The procedural aspects of enteral and topical medication administration are another foremost discussion topic of this chapter. In these discussions, the reader is educated on safe practices and methods to make the task 'less disagreeable to the nurse, by making it more tolerable to the patient' (p. 49). Safe medication administration is linked to scrupulously following the directions of the doctor. However, he clarifies this does not equate to 'servile submission'.

Rather, the nurse should be able to exercise her 'enlightened judgement' and suggest alternative treatments as appropriate (p. 57). Despite encouraging the nurse to engage in problem-solving, Longshore was careful to make it clear to the reader that 'his [the physician's] decision must be considered final' and the 'nurse fulfils her duty by obedience' (p. 57).

This text provides insights to the expected tasks and conduct of nineteenth-century private nurses. The concepts discussed in this text resemble many of Nightingale's sentiments in *Notes on Nursing*. However, one distinct difference is that Longshore repeatedly refers to nursing as a profession.

Sieveking, E. (1846). *The training institutions for nurses and the workhouses: An attempt to solve one of the social problems of the present day*. London, England: Williams & Norgate. Retrieved from https://archive.org/details/b21983471/mode/2up



THE TRAINING INSTITUTIONS

FOR NURSES,

AND

THE WORKHOUSES:

AN ATTEMPT TO SOLVE ONE OF THE SOCIAL PROBLEMS OF THE PRESENT DAY.

BY

EDWARD SIEVEKING, M.D.

MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS; PHYSICIAN TO THE NORTHERN DISPENSARY; LATE PHYSICIAN TO THE BRITISH RESIDENTS AT HAMBURG, ETC. ETC. ETC.

"What is wanted by this large community is not so much money, not so much the gift of old clothes, but what they want is the living agent."—LORD ASHLEY.

PRINTED FOR PRIVATE CIRCULATION.

LONDON:
WILLIAMS AND NORGATE,
HENRIETTA STREET, COVENT GARDEN.
1849.

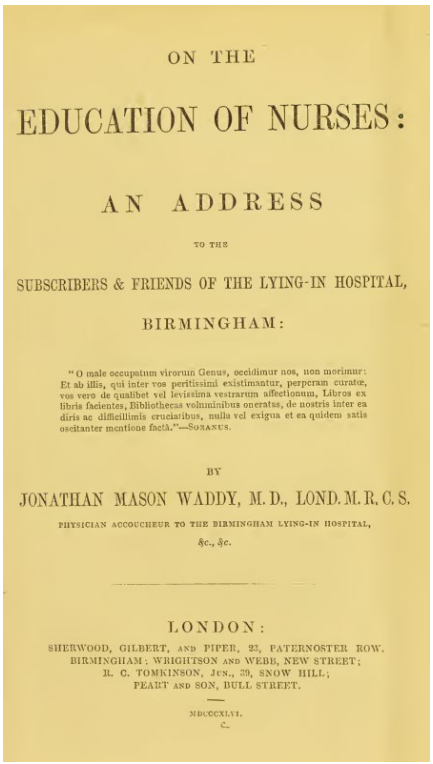
Figure 5.21: Title page of *The Training Institutions for Nurses and the Workhouses* (1846)

This 22-page pamphlet is a petition explaining the need for healthcare and nursing reform in Victorian England. Its core content discusses the need for the introduction of nurse training under the premise that health care should be a universal right. Clear correlations are made between the poorer health status of the working class and impoverished, and their confined living conditions. Sieveking also indicated the traditional carers of this socio-economic class—laywomen—were ignorant and time-poor; therefore, they were ill-equipped to care for the infirmed. To counteract such 'social problems' (p.11), Sieveking argued that healthcare provision should be provided by trained nurses rather than laywomen. To address this need, the establishment of *The Training Institution for Nurses* was petitioned, a program in which women who resided in workhouses could be recruited and trained as a nurse.[74] An overview of this

[74] In Victorian England, workhouses were places where the poor could live and gain employment.

initiative is provided, including funding and remuneration, the benefits associated with training workhouse women to be nurses and the preferred qualities and mannerisms of nurses. This document helps contextualise the beginning of socialist reforms in the mid-nineteenth century England. It also provides evidence that doctors such as Sieveking had recognised that better-educated nurses were the missing link between medical care and improved patient outcomes.

Waddy, J. M. (1846). *On the education of nurses: An address to the subscribers and friends of the lying-in hospital, Birmingham*. London, England: Sherwood, Gilbert & Piper. Retrieved from https://archive.org/details/b21472981/page/n2/mode/2up



ON THE

EDUCATION OF NURSES:

AN ADDRESS

TO THE

SUBSCRIBERS & FRIENDS OF THE LYING-IN HOSPITAL,

BIRMINGHAM:

"O male occupatum virorum Genus, occidimur nos, non morimur: Et ab illis, qui inter vos peritissimi existimantur, perperam curatæ, vos vero de qualibet vel leviesima vestrarum affectionum, Libros ex libris facientes, Bibliothecas volumnibus oneratas, de nostris inter ea diris ac difficillimis cruciatibus, nulla vel exigua et ea quidem satis oscitanter mentione facta."—SORANUS.

BY

JONATHAN MASON WADDY, M.D., LOND. M.R.C.S.

PHYSICIAN ACCOUCHEUR TO THE BIRMINGHAM LYING-IN HOSPITAL,

&c., &c.

LONDON:

SHERWOOD, GILBERT, AND PIPER, 23, PATERNOSTER ROW.
BIRMINGHAM: WRIGHTSON AND WEBB, NEW STREET;
R. C. TOMKINSON, JUN., 39, SNOW HILL;
PEART AND SON, BULL STREET.

MDCCCXLVI.

Figure 5.22: Title page of *On the Education of Nurses* (1846)

The content of this manuscript is an address delivered to the supporters of Birmingham and the Midland Counties Lying-in Hospital, which was established four years prior. Despite being a lying-in hospital, this institution cared for non-obstetric patients, including children, and the address primarily refers to the role of the nurse as opposed to that of the midwife or monthly nurse.[75]

In this 25-page address, Waddy outlines the benefits that educating nurses would have for the health outcomes of the sick because 'there cannot be a greater difference than that exists between an educated and ignorant nurse' (p. 13). This difference is demonstrated to the reader

[75] The introduction of the pamphlet indicates 'fifteen hundred sick patients have received medical relief' since the establishment of the hospital (p. v). A monthly nurse was a private nurse who cared for a mother and infant during the postpartum and postnatal period (up to one month), normally in their family home (Young, 2004).

through a series of adverse patient events that were the result of nurse incompetence. To correct this ignorance, Waddy suggests that nurses needed to be educated to detect changes in a patient's clinical condition, safely administer medications and implement doctors' orders diligently. Waddy also indicates that nurses required instruction on morals, 'the general laws of health and disease' (p. 19), 'remedies of great power, as mercury, iodine, opium' (p. 19), leeching, apothecary treatments (e.g., various poultice formulations), parenteral medications, dressings, hygiene and therapeutic baths, dietetics and maintenance of the physical environment (e.g., ventilation, basic infection prevention and control measures). The provision of such education is correlated with improvements in patient safety, encouraging patients' trust of the nurse and maintaining the reputation of the institution and medical officers.

Waddy also critiques the comportment of the nurse, detailing their desired age, physical attributes, manners, morals, faith and decorum. A nurse's age and physical attributes were linked to the ability to perform the laborious work of nursing and to not offend the patient. For example, Waddy believed prospective nurses under the age of 25 years would lack the 'corporeal strength' to lift and mobilise patients (p. 7), whereas a tall nurse was viewed as 'often very ungainly' (p. 8). The attitudinal aspects of the nurse are discussed with regard to kindness, attention and patience. For example, an even temperament was necessary to avoid taking 'offence at any little petulance and annoyances she may meet' (p. 10) and to perform the 'unpleasant and menial duties' of nursing (p. 10).

This manuscript provides insights into the medical professions' views about the role of the nurse in Victorian England. While implementing nurse education was linked to improving morbidity and mortality rates, the text also alludes to underlying power struggles between nurses and doctors, including the need for nurse obedience.

South, J. F. (1857). *Facts relating to hospital nurses, in reply to the letter of 'One who has walked a good many hospitals,' printed in The Times of 13th April last: Also, observations on training establishments for hospital and private nurses*. London, England: Richardson Brothers. Retrieved from https://archive.org/details/b22283237/mode/2up

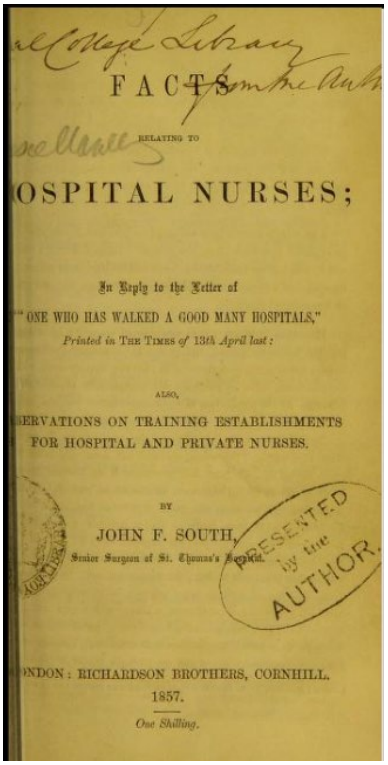


Figure 5.23: Title page of *Facts Relating to Hospital Nurses* (1857)

In this manuscript, South—who was a senior surgeon at St Thomas' Hospital—refutes claims made against the conduct and demeanour of hospitals nurses in *The Times* newspaper. At the time of writing this rebuttal, South reported he had been a doctor for over 40 years and this experience had resulted in him forming the opinion that the ill-treatment of hospital nurses by other hospital staff (e.g., 'being sworn at by surgeons and bullied by dressers') were lies (p. 6). He also refutes the claims made in *The Times* article that nurses were 'meek, pious, saucy, drunken, or unchaste' and instead describes nursing staff as self-respecting, intelligent, dedicated and attentive women (p. 8).

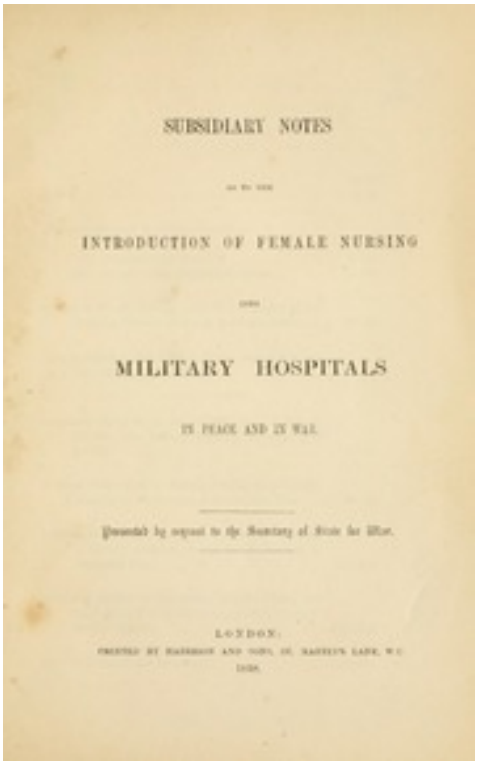
To further debunk the allegations made in the newspaper article, South meticulously details the hierarchical structure of his hospital's nursing department. Included in this description are the roles and responsibilities of each type of nurse—the sisters, day nurses and night nurses. He explains the instructional methods and requirements of each nursing level, including the mentorship role a physician or surgeon must undertake to improve the efficiency and trustworthiness of a probationary sister. Throughout his narrative, nurses and doctors are portrayed as parties in a collaborative relationship. South's respect for his nursing colleagues is evident throughout, with references made to the highly qualified and experienced Mrs Roberts, a sister at St Thomas' who accompanied Nightingale to the Crimea. South explains that Mrs Roberts went to Scutari 'not for mere pecuniary gain … but was among the very few who went out with anxious desire to render their services' (p. 15).

The second part of the manuscript critiques proposed reforms to nursing training that were circulated in England during the 1850s. When reading this manuscript, it is apparent that South questioned the political motives behind the need for an 'institute for the training, sustenance, protection of nurses and hospital attendants' (p. 18).[76] In this critique, he argued that the supposed need for these reforms was based more on the repeated and unproven allegations of 'mismanagement and misconduct of hospital nurses' than on factual evidence (p. 18).

In reading this rebuttal, it is evident that South held London's hospital nurses in high esteem and believed the current system of informal nursing training '*was and is efficient*' (p. 20). Such strong opinions in this rebuttal indicate that the need for nursing reform was not a belief shared by all in the medical fraternity. South's arguments also challenge the stereotypical rhetoric that surrounded early nineteenth-century English nurses.

[76] This would later become the Nightingale School of Nursing at St Thomas' Hospital—established in 1860 (McDonald, 2009).

Nightingale, F. (1858). *Subsidiary notes as to the introduction of female nursing into military hospitals in peace and in war*. London, England: Harrison and Sons. Retrieved from https://archive.org/details/subsidiarynotesa00nigh/page/n4/mode/2up


SUBSIDIARY NOTES

INTRODUCTION OF FEMALE NURSING

MILITARY HOSPITALS

LONDON:

Figure 5.24: Title page of *Subsidiary Notes* (1858)

Subsidiary Notes is a collection of several manuscripts on nursing reform in both military and civilian hospitals. A range of heterogeneous topics is included in this collection, such as Nightingale's experiences and observations from the Crimean War; descriptions of the governance and infrastructural requirements so that female nurses can formally serve in military hospitals (e.g., the hierarchical and reporting structure between nurses, orderlies and doctors); and design considerations for military hospitals (e.g., the establishment of pavilion-style buildings, floor coverings, heating and ventilation). This publication also shares Nightingale's opinions on the merits and efficacy of the religious and secular nursing systems within Great Britain's hospitals at the time.

In this publication, Nightingale (p. 19) describes nursing work as ‘coarse, repulsive, servile, noble’ and notes that it ‘never will, never can be popular work’. Her descriptions portray two polarising categories of nursing practice: inefficient religious nursing and immoral hospital nursing. These sentiments are further articulated in her critique of her Crimean colleagues: ‘Sisters of Mercy, as regards the ward service, are decorous and kind, and sometimes inefficient and prudish. Nurses are careful, efficient, often decorous, and always kind, sometimes drunken, sometimes unchaste’ (p. 16). During these discussions, Nightingale questions the ‘(so-called) training’ of the Catholic and Anglican nurses that served with her in Crimea and the value of having lady volunteers in attendance (p. 3).

Much of Nightingale’s discussions detailed the feasibility and practicalities of introducing nursing reforms. The recommendations made by Nightingale in such discussions focus on improving the productivity of nurses by introducing clearly defined roles and reporting structures within the nursing hierarchy (e.g., each ward should have its own head nurse), streamlining processes within hospitals (e.g., each ward should have its own linen supply cupboard; lodgings should be close to the ward) and recruiting and retaining virtuous nurses. Underpinning these discussions were Nightingale’s thoughts about the moral tone of recruited nurses. Qualities such as self-discipline, obedience, sobriety, honesty, industriousness and being under the ‘influence of religion’ were considered of upmost importance in nursing (p. 14). Nightingale believed many of these qualities could be imparted to recruits through moral education:

> And it may be safely be said that, if by the end of the first year she has not improved her trustworthiness, she had better go; and if she have not reached her culminating point by the fifth year, she certainly will not improve afterwards. (p. 56)

Offering long-term incentives, such as annual wage increases and the promise of a pension upon retirement, was another strategy proposed by Nightingale to implement and maintain nursing's moral reform.

Many of the key suggestions made by Nightingale in *Subsidiary Notes* became foundations for the subsequent nursing reforms of the mid-late nineteenth century. Consequently, *Subsidiary Notes* is an important prologue to the professionalisation of nursing.

5.8 Summary

This chapter presented the results of the scoping review. Adhering to the scoping review protocol yielded 24 primary sources. A summary of each primary source included in the corpus was presented to justify the source's inclusion in this study. Sources were used to conceptualise pre-professionalised nursing theory and praxis, with the findings of this conceptualisation presented in Chapter 6.

Chapter 6: Findings 2—A 'Thousand Nameless Acts'—The Fundamentals of Nursing Praxis

6.1 Introduction

Chapter 5 presented a synopsis of the corpus and introduced the key content within each manuscript. In this chapter, the quotidian roles and responsibilities of the pre-professionalised nurse will be presented. These fundamental aspects of early nursing praxis were described as a 'thousand nameless acts of kindness and attention' (Waddy, 1846, p. 6) and are presented under three themes: restoring health, promoting comfort and preventing complications. This chapter commences with an overview of the pre-professionalised nurses' scope of practice before discussing each theme.

6.2 Understanding the Scope of Pre-professionalised Praxis

Irrespective of the type of nursing—religious or secular, or in the hospital or home environment—common nursing tasks were found across the corpus. These tasks formed the pre-professionalised nurse's scope of practice and can be designated as independent, interdependent or dependent nursing interventions. Table 6.1 provides an overview of the fundamental tasks routinely performed by nurses between the sixteenth and mid-nineteenth centuries.

Table 6.1: Fundamentals of nursing care—sixteenth to mid-nineteenth centuries

Restoring health	Preventing complications	Promoting comfort
Preparing and administering therapeutics[D]	Assessment and observation[ID]	Easing spiritual and emotional distress through the provision of pastoral support[I]
Medicinal diets	Monitoring and reporting	Preserving the patient's dignity through assisting with activities of daily living[ID]
Medicinal remedies	Surveillance	Assisting with personal hygiene and grooming
Indications	Maintaining a 'safe' environment[ID]	Helping the sick to dress
Preparation	Improving air quality	Managing mobility and activity levels
Administration	Maintenance of a clean clinical environment	Elimination and continence management
Specialised clinical procedures[ID]	Limiting exposure	Encouraging adequate sleep and rest[I]
Bloodletting		
Leeching		
Vesicatories		
Other procedures		

I—independent nursing intervention; ID—interdependent nursing intervention; D—dependent nursing intervention.

Independent nursing interventions (e.g., the provision of pastoral support) were nurse-initiated tasks that did not require approval from the doctor or another health professional. Interdependent nursing tasks (e.g., maintaining a 'safe' environment) were tasks for which the nurse needed to liaise with other members of the healthcare team about the indication for, frequency of, or outcome of the nursing intervention. Dependent nursing interventions were nursing tasks whose initiation relied on a doctor's order, such as the administration of remedies and medicinal diets.

6.3 Restoring Health

The first theme of *a Thousand Nameless Acts* presents early nursing interventions aimed to restore a patient's health to their pre-morbid health status via the reinstatement of humoral balance (see Table 6.2). These interventions included the administration of therapeutic remedies and assistance with or performance of specialised procedures. Such tasks formed a large proportion of routine nursing work and were normally prioritised over all other nursing interventions.

Table 6.2: Themes and subthemes—restoring health

Theme	Subthemes
Restoring health	Preparing and administering therapeutics Specialised clinical procedures
Preventing complications	Assessment and observation Maintaining a 'safe' environment
Promoting comfort	Easing spiritual and emotional distress Preserving the patient's dignity Encouraging adequate sleep and rest

6.3.1 Preparing and administering therapeutics

The preparation and administration of therapeutic remedies was a foremost task of the pre-professionalised nurse. Several authors, including Gedike (1837), advised that this task was 'one of the nurse's most important duties' (p. 46). Subsequently, substantial sections of the sources were dedicated to this nursing intervention. Therapeutic agents used by early nurses were medicinal diets, internal remedies and external remedies (see Table 6.3).

Table 6.3: Common therapeutic remedies used by nurses, sixteenth to mid-nineteenth centuries

Dietetics	Internal remedies	External remedies
Broths	Elixirs	Baths
Desserts	Gargles	Dry
Jellies[1]	Herbal teas/tisanes	Steam
Juices/fruit waters	Juleps	Specific body parts (e.g., feet, hands)
Lemonade/orangeade	Pills	Wet
Meat dishes	Potions	Inhalations
Milks (e.g., almond)	Powders	Injections
Whey	Salts[1]	Bladder irrigation/instillation[2]
	Syrups	Ear drops
	Tinctures[2]	Enemas/clysters
		Eye drops
		Intranasal[2]
		Intrapharyngeal[2]
		Vaginal
		Topical
		Compresses
		Plasters[2]
		Poultices/cataplasms
		Rubs/Liniments
		Salves
		Suppositories
		Vesicatories[1]
		Wax wraps[2]

[1] Eighteenth century onwards; [2] nineteenth century onwards.

6.3.1.1 Medicinal diets

Medicinal diets were an integral treatment used to restore health in accordance with humoralist principles. These diets were ordered by the doctor following a review of the patient's condition. Preparation and administration of the ordered diet were delegated to the nursing staff, with the senior nurse overseeing the process (Anonymous, 1524, 1590; Congregation of Bernardino de Obregon, 1634). Despite unique dietary regimens for individual patients, some general rules about diet existed early in the period. For example, *Instruccion de Enfermeros* indicates that parsley was contraindicated for patients who had 'typhus, carbuncles, erysipelas or recent wounds' because the herb was believed to be 'hot' and increased the inflammatory humors of yellow bile and blood (Fernandez, 1625, p. 140). Rules also existed for the timing and frequency of different diets. For example, the Madrid General Hospital's (1760, p. 56) *Constituciones* indicates that patients on 'rigorous broth diets' received broths every four hours and were encouraged to drink water, cordials or 'other ordered beverages' in between the consumption of prescribed broths.

The need for a medical order for the patient's nutritional intake continued into the nineteenth century. However, nurses in this era were presented with conflicting information about dietary management. Some authors provided explanations that were interwoven with modern understandings of digestion. Greiner (1809) claimed that in 'hot' diseases such as fevers, 'the stomach works little or not at all' (p. 111), so food was to be avoided until the patient's appetite returned. However, other authors provided little to no additional information about why a particular diet was necessary. Mai (1784) insisted that people with eye diseases needed a diet of salty meats, especially salted pig tongue, yet he failed to explain to the reader how a sodium-rich diet improved vision. Other authors, such Dieffenbach (1832) and Gedike (1837), failed to include any recipes because they felt that including sample recipes would lead to the nurse deciding what was best for the patient regardless of the physician's order. Other authors

included a plethora of elaborate recipes that the doctor may order, such as turtle soup. The inclusion of such recipes instead of plain, simple foods suggests a demonstration of the author's sophisticated palate rather than a medicinal remedy. Added to these elaborate recipes were recommendations for the nurse to make dining an enjoyable experience for the patient by serving food in fine china on white linen. Such recommendations were possibly used as a platform to demonstrate the physician's status and/or scientific expertise in all matters related to health.

6.3.1.2 Medicinal remedies

6.3.1.2.1 Indications

Many internal and external remedies administered by nurses until the nineteenth century aimed to expel toxic humors from the body. Subsequently, emetics, purgatives and enemas (clysters) were commonly used therapeutic remedies that were prepared and administered by nurses.

Emetics were used to induce vomiting in people with stomach ailments. While a medical order was normally needed for all internal remedies, seventeenth-century nurses were allowed to initiate emetics if a patient complained of a stomach ache and the doctor was absent (Fernandez, 1625). A staged approach was used in which the nurse first offered tepid water, followed by more complex remedies, such as a concoction of hot water infused with radish leaves and *oximiel* (a vinegar-honey syrup) or a cup of white wine infused with ground mice dung. The latter was described by Fernandez (1625, p. 97) as 'a much proven remedy, albeit dirty'. In the eighteenth century, plants such as ipecacuanha and chemical elements such as antimony were used as purgatives (Carrère, 1786; Roma & Cabreyra, 1753). Emetics were given as either a single dose or divided into several smaller doses at the physician's discretion. Post-administration, the nurse was required to support the patient's head during vomiting (Serain,

1777), presumably to limit the risk of aspiration. The patient was also encouraged to drink water and their diet was restricted to broths for 24 hours.

Purgatives were used to treat infections by expelling the body of deranged humors through the stimulation of the gastrointestinal tract. Fernandez (1625) provided various guidelines for their administration, including:

- ensuring the patient fasted for four hours before and after administration
- having a bowl close in case the patient needed to vomit while drinking
- distracting the patient during its administration (e.g., counter-stimulation using a cupping glass placed on the stomach)
- offering the patient a palate-cleanser post-administration (e.g., rinsing their mouth with cold red wine or offering a pear, apple or some olives).

The taste, smell and odour of purgatives was still a source of displeasure for patients in the eighteenth and nineteenth centuries. To limit the risk of the patient vomiting the purgative, Carrère (1786) recommended techniques such as desensitising the person's palate by encouraging coffee to gargle or brandy prior to its administration, hiding the pill/syrup until its scheduled time and pinching the patient's nose during administration. After the patient swallowed the pill, the nurse was encouraged to rinse the patient's mouth with cold water and offer jam to the patient (Serain, 1777). The success of the purgative was judged on the resultant bowel motion. If the patient failed to defecate within four hours of its administration, the nurse could try other measures to stimulate the gut, including mobilising the patient, turning the immobilised patient, placing hot cloths across the abdomen and administering an oil-based enema (Fernandez, 1625). Alternatively, Serain (1777) recommended that the nurse could offer beef, chicken or vegetable broth, sweet tea or honeyed water to stimulate the gut.

Enemas and clysters were used to treat most conditions, with some authors believing they were more effective than the internal remedies:

> It is one of the most favourable and important remedies to be used externally, and yet one cannot talk about it to the people, and many prefer to die out of untimely modesty, stubbornness, and superstition before allowing themselves to receive a clyster. (Schmidt, 1831, p. 89)

Accordingly, the nurse was expected to be 'very expert' in this task (Johnson, 1819, p. 157). These external remedies were administered in both non-emergent (e.g., to treat constipation) and emergent situations (e.g. in a patient who was post-ictal or a near-drowning victim). The routineness of the procedure meant that the nurse 'ought always to have in readiness an armed piped' (Johnson, 1819, p. 161). The perceived therapeutic effects of enemas and clysters included:

> 1) to promote the evacuation of the thick [large] intestine; in this respect they are a very beneficial remedy for stubborn constipation, (2) to quench the spasms and pains of the intestines as well as the adjacent viscera in the abdomen, (3) as a softening bath for the thick [large] intestine, 4) to strengthen the intestines and the organs nearest to them, [and] 5) as a means of derivation, in order to lure the excitement of the activity of life away from other more distant organs to the intestines. (Greiner, 1809, p. 50)

The popularity of enemas and clysters meant that large sections of most sources were dedicated to explaining the purpose of and administration considerations for enemas and clysters. Table 6.4 provides an overview of such advice.

Table 6.4: Sample of the range of advice offered about the use of enemas and clysters, seventeenth to mid-nineteenth centuries

Advice topic	Exemplars of instructional advice found in the sources
Provision of patient education	Instructing the patient to exhale during the insertion of the enema/clyster: 'The nurse shall order the patient to open the mouth and to breathe out, because in this way [the nurse] will not hurt the patient' (Fernandez, 1625, p. 85). Instructing the person to retain the medicament for as long as possible: 'The tube is then withdrawn, the patient is quietly left in the same position, and instruct the patient to keep the clyster [solution] inside himself for as long as possible' (Schmidt, 1831, p. 92). Informing the patient of the benefits of enemas. For example, their daily administration was equated to saving 'many thousands of patients' (Schmidt, 1831, p. 90).
Preparing the environment	Several authors recommended placing a folded sheet underneath the person's buttocks prior to administration (Gedike, 1837; Mai, 1784; Martin, 1832; Schmidt, 1831) so that 'other bedding will not be contaminated' (Schmidt, 1831, p. 91).
Preparing the patient	A Sims' position was identified as the most appropriate position for administration: 'Where possible, choose the left side, because the rectum is here' (Gedike, 1837, p. 67). Other positions were also acceptable for particular patient groups. For example, a supine position was deemed appropriate for agitated patients (Fernandez, 1625), unstable patients (Gedike, 1837) or injured patients, such as those with a leg fracture (Schmidt, 1831).
Volume of enema solution	When deciding on the volume of solution to be administered, the nurse was expected to consider the age of the person: 'The quantity of liquid, when it has not been designated, is two to four ounces for the newborns up to the age of one year' (Fodéré, 1815, p. 73). The solution volume could also be halved when the patient was experiencing gastrointestinal inflammation (e.g., colitis) or urinary retention (Carrère, 1786).
Temperature of the enema solution	Lukewarm solutions were recommended because overly hot solutions were thought to 'damage the anus' (Mai, 1784, p. 77). Mai (1784) and Schmidt (1831) also advised that the nurse should place a sample of the warmed enema solution on their eyelid prior to administration to ensure the solution would not cause discomfort to the patient.
Inserting the syringe or clyster tubing	Different techniques were recommended regarding how the syringe or clyster tubing should be inserted into the anus. Johnson (1819) advised: 'The nurse now must pass the point of her left fore finger [sic] (the nail being cut short) close to the anus, or a little within it, and then slide the pipe along this finger, till the greatest part of it is entirely introduced. In doing this the pipe must be directed a little backwards, taking care not to push it against any part so much as to cause pain' (pp. 162–163).
Post-procedural care	The nurse was required to provide perineal care and thoroughly clean the equipment after its use: 'After each clyster, he draws the syringe a few times full

	of soapy water to clean it, then diligently cleans it and lubricate the felt around the plunger with oil, butter or lard so that it does not dry out and the syringe becomes unusable' (Martin, 1832, p. 37).
Troubleshooting problems	Tips were provided to overcome difficulties during the procedure, such as inserting the tip of the enema into the anus. This problem was commonly addressed through lubricating the tip of the syringe with either butter, lard or oil: 'Before introducing this tube, lubricate it with butter or oil and then slowly and gradually' (Martin, 1832, p. 37).

A wide array of 'receipts'[77] was provided to cater for differing clinical presentations. For example, Hanbury (1825) offered: 'I recommend an injection of good beef and mutton to be given every morning;—in a state of *weakness* it will be found very nourishing and beneficial' (pp. 59–60). The choice of solution was determined by the doctor, but earlier books such *Luz da Medicina* (Roma & Cabreyra, 1753) and *Instruccion de Enfermeros* (Fernandez, 1625) provided several recipes that could be nurse-initiated.

6.3.1.2.2 Preparation

Nurses between the sixteenth and eighteenth centuries were responsible for preparing most internal and external remedies. The complexity of these remedies varied, ranging from tisanes (herbal teas) through to the magisterial syrups and pills. Magisterial remedies were formulated according to a physician's or hospital's standard orders. For example, *Instruccion de Enfermeros* contains a recipe for 'Doctor Pugino's magisterial concoction':

> Take two ounces each of senna and polypody leaves; three ounces of currants; twenty prunes; two drams each of cinnamon and ginger; four drams of aniseed and four pounds of barley concoction. Soak in water for six hours, then boil it until it is reduced by a quarter. Then add violet blossoms, and oxtongue blossoms, two handfuls of each, boil a little longer; then sieve.

[77] Receipt is archaic term for recipe ('receipt', 2008).

> This concoction is the most used for purges in the apothecaries of the Court. (Fernandez, 1625, p. 219)[78]

Pills were rarely used in the sixteenth and seventeenth centuries. However, they were used to treat some conditions, such as French disease (syphilis). Nurses worked alongside the apothecary to produce these specialised pills. The pill-making stages included: preparing a plant-based reduction (e.g., blackberries) using a medical receipt; drying the reduction; shaping the dehydrated mixture in a log-like shape and cutting the 'log' into individual pills. To increase the palatability of the pills, they were gilded, silvered, wrapped in a piece of onion or soaked in honey (Fernandez, 1625).[79]

By the mid-eighteenth century, there was a shift towards pharmacy-prepared internal medications. This shift was possibly attributable to the belief that internal remedies were more dangerous than external remedies:

> the administration of the internal general remedies requires more caution, firstly because the internal parts of the body are more tender, more important, and more sensitive; second, because the removal of the drugs, if they are harmful, [is] harder, even mostly impossible. (Greiner, 1809, p. 28)

The shift to pharmacy-prepared and commercially prepared medications in this period was potentially aimed at reducing the risk of medication errors through nurse ignorance—a sentiment shared by several late eighteenth- and early nineteenth-century authors:

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[78] A dram is unit of weight equating to three scruples (60 grains) or 1/8 of a pound. Dr Pugino was a renowned doctor of the era who reportedly gave this famed recipe to Philip II. The author of *Práctica de Boticarios, Guia de Enfermeros, Remedios para Pobres* (1634), Pedro Gutiérrez de Arévalo, claimed that he was the first person to print this recipe (pp. 100v–101v, as cited in Bueno, 2009)*;* however, this claim has been disproven by its existence in the second edition of *Instruccion de Enfermeros*, printed nine years earlier.

[79] Gilding and silvering pills likely started in the sixteenth or seventeenth century. An earlier study by Bela (2006) found that a non-medical text, *Golden Fleece* (1626), mentioned their use in a religious analogy. However, it was not until the second half of the seventeenth century that these coated pills were included in two pharmacopeias. Therefore, the pills' inclusion in the second edition of *Instruccion de Enfermeros* may possibly be their first citation in a text.

> With all this learned ignorance, some degenerated nurses are bold enough … [to] either not give enough to the patient, or their sense of superiority allows them to criminally alter the medicines before the physician has accurately assessed the circumstances. (Mai, 1784, pp. 83–84)

> the greatest exertions of the wisest man may be foiled by a silly ignorant woman who is self-conceited and presumes to prefer her own judgement to that of the physician. (Hanbury, 1825, p. 34)

This change may also have been influenced by the medical profession's desire to divorce themselves from their quackery roots, thereby reinforcing their scientific prowess to the broader society:

> It is very regrettable that almost every nurse, as he obtains a remedy here and there through the long association with doctors and surgeons, gradually degenerates himself into an irrepressible quack, into a medical absurdity. (Mai, 1784, p. 83)

Such changes in thinking resulted in the nurse being relegated to preparing a narrowed scope of remedies. For example:

> The ability of these employees [the nurse] should only extend to the preparation of herbal teas commons, a few infusions, simple whey; and to the preparation and application of poultices, fomentations, frictions, enemas, suppositories … vesicatories and leeching where appropriate; and finally to the conduct of baths. (Fodéré, 1815, p. 64)

6.3.1.2.3 Administration

Medication administration practices applied an archaic version of the five 'rights'. Early nurses and doctors recognised the dangers of administering the remedy to the wrong patient. To limit the risk of remedy error, the *Constituciones* of Madrid General Hospital and the Royal Hospital of Santiago de Compostela described the need for admitted patients to be allocated a bed

number rather than using names to identify people. This practice was used to identify the 'right person' during diet and remedy administration and assisted in reducing the risk of misidentifying a delirious or unconscious patient.

Ensuring the 'right dose' of the 'right remedy' was administered was a primary responsibility of the nurse who prepared the medicinal diet or remedy. While early books such *as Instruccion de Enfermeros* and *Luz da Medicina* contained the receipts for a broad range of common remedies, it is also evident that nurses relied on in-house hospital recipe books. For example, the Madrid General Hospital *Constituciones* indicates that any doctor alterations to a standard recipe needed to be written in the hospital's receipt book with the 'clearest and most understandable information, so that it is not confused with other orders' (General Hospital of Madrid, 1760, p. 57).[80]

To be able to use and understand such receipts, the nurse needed to possess practical knowledge about routine measurements (e.g., be able to differentiate between drams, ounces and grains) and be able to identify medicinal plants and spices. As more pharmacy-prepared medicaments became available in the nineteenth century, the nurse was expected to check for the 'right remedy' and 'right dose' by reading the medication label against the doctor's order, confirming the directions for use and ensuring the medicament was appropriate for either internal or external use.[81] To mitigate the risk of accidentally administering an external remedy internally—an error associated with causing 'great harm and even the death of a patient'—nurses were instructed to refrain from tearing off any affixed prescriptions or directions from the bottle (Gedike, 1837, p. 47). Storing internal and external remedies separately was another

[80] Nurses may also have relied on dedicated pharmacopeias to assist in their preparation of remedies. Examples of such pharmacopeias include the French text *Pharmacopee Universelle* (*Universal Pharmacopoeia*, 1763) and the Spanish texts *Practica de Boticarios, Guía de Enfermeros, Remedios para Pobres* (*Practice of Apothecaries, Guides of Nurses, Remedies for the Poor*, 1634) and *Rectario Medicinal Espagirico* (*Spagyric Medicinal Recipes*, 1713/1734).

[81] In nineteenth-century Prussia, prescriptions of internal remedies were written on white paper and prescriptions for external remedies were written on blue paper. These were then affixed to the bottle by the apothecary.

strategy nurses were urged to follow to further reduce this risk 'because the external remedies are usually much stronger than the internal ones' when ingested (Greiner, 1809, p. 29).

The need for accuracy while measuring the 'right dose' of the remedy was stressed to early nurses. For example, Greiner (1809) explained:

> On the notes it is stated how much should be given each time. You follow that exactly. If an ordinary tablespoon is fully prescribed, do not add small spoons to it, and make the spoon-neatly full, not just up to or slightly above half. If a half tablespoon-full of the certain drug [is ordered], then exactly one half is to be determined by quantity. (p. 30)

In circumstances in which the physician had ordered a titrated dose, incremental dosing according to the patient's response was advised: 'For example, [if the order states] "ten to fifteen", one starts with the least number, giving one drop more each time, until one has reached the highest number' (Greiner, 1809, p. 34). Extra precautions to ensure the 'right person' received the 'right dose' were also taken with particular population groups. For example, when caring for someone with a mental illness, the nurse was required to supervise the patient during the entire administration process: 'The nurse should never put the medicine in the hands of the patient himself so that he does not throw it away, or take too much of it' (Gedike, 1837, p. 159).

The 'right time' for the administration of meals and remedies was another important consideration for the pre-professionalised nurse. The hospital regulations used in this analysis indicate that there were standardised times for administering these therapeutics. For example, the Madrid General Hospital's *Constituciones* (1760) indicates purgatives, syrups and other internal remedies were to be administered at 0500 hours during summer and at 0600 hours during winter. Similar practices persisted into the nineteenth century. For example, when administering purgatives, the nurse was advised to 'always choose the morning so that the drug does not mix with the food in the stomach' (Schmidt, 1831, p. 58).

A derivative of the 'right time' was the 'right sequencing' of remedies to prevent any potential meal-to-remedy or remedy-to-remedy interactions. General recommendations were produced to help nurses juggle the timing of diet and multiple remedies because doctors often did not have the time to explain the correct sequencing:

> The good nurse will always begin with the enema, and having done this for half an hour, then the bloodletting shall be ordered; thereafter, julep, *defensivo* and ointment, and half an hour later, the meal. (Fernandez, 1625, p. 112)

When administering the remedy, the nurse also needed to be cognisant of 'right route'. Differentiating between internal and external remedies was not the only 'route' consideration. Rather, the nurse was expected to know how to apply a wide range of external remedies to targeted regions of the body. This expectation was most visible in the seventeenth- and eighteenth-century texts. For example, Obregonian nurses were frequently required to use anatomical landmarks to locate organs such as the stomach, heart, liver, spleen, kidneys and regions of the brain during the administration of poultices and ointments. Detailed instructions were provided to help the nurse locate the desired organ. The liver, for instance, was found:

> on the right side, below the false ribs, about two fingers away from the stomach; the area where remedies must be applied is about four fingers wide ... and it must be as long as the patient's palm. (Fernandez, 1625, p. 44)

While the five 'rights' were evident in these early texts, other more contemporary 'rights', such as the 'right documentation' and 'right to refuse' were less obvious. With the latter, there instead existed an underlying 'must not refuse' because the nurse was expected to prioritise the doctor's orders over the patient's curiosity about, or refusal to take, the ordered remedy. Certain population groups were noted to have 'great[er] difficulty in conforming to the requisites of cure', including those with mental illnesses or gastrointestinal complaints (e.g., anorexia and

flatulence) and 'youth who had been encouraged to indulge their fears and apprehensions, especially the fair sex, who … [are] subjected to hystericks [sic], and miscarriages, &c.' (Johnson, 1819, p. 154). This 'must not refuse' mindset meant the nurse was commonly advised to engage in distraction techniques or trick the patient into taking their medication, even if the patient was resistant to its administration. In cases in which the patient could not be tricked or dissuaded from their refusal, the nurse was expected to report this outcome to the doctor (Gedike, 1837). Failing to report the patient's refusal or lying by stating that the patient did take the medication was viewed as a dismissible offence.

6.3.2 Specialised clinical procedures

Specialised clinical procedures were incorporated into the patient's treatment regimen when their condition was unresponsive to other routine remedies. These procedures fall into three categories: advanced external remedies, resuscitation methods and surgeries. Box 6.1 lists the specialised procedures found in the corpus.

Box 6.1 Specialised procedures found in the corpus

Advanced external remedies:
- application of pigeon or puppy to head
- burns treatments
- catheterisation
- inducement of diaphoresis via the use of an *estufa* (sweat-box)
- topical plasters and vesicatories.

Resuscitation methods:
- administration of a tobacco enema
- expired air resuscitation.

Surgeries:
- assisting with surgeries (e.g., autopsies, amputations and cauterisations)
- bloodletting
- dry cupping
- leeching (+/- cupping)

General clinical indications for the implementation of specialised procedures included episodes of acute deterioration (e.g., the observation of rigours in a fever illness, seizures and syncope) and out-of-hospital emergencies (e.g., animal bites, near-drownings and suicide attempts).

The nurse's role in these procedures was influenced by a range of factors including staffing levels, clinical setting and location, type of deterioration, complexity of the procedure and the experience level of the nurse. In most surgical procedures, such as bloodletting or amputating a limb, the nurse assisted the surgeon or barber to perform the surgery. In other procedures, such as the topical application of a sacrificed pigeon or puppy to a patient's head (discussed in in Table 6.7), the nurse performed the psychomotor skill unsupervised. During emergencies, the nurse was expected to expand their normal scope of practice and independently perform most of these procedures, particularly when medical staff were absent. For this reason, nurses were instructed on the theory and skills required to perform such procedures. Bloodletting, leeching and the application of topical plasters and vesicatories were the most frequently cited procedures in the corpus.

6.3.2.1 Bloodletting

Bloodletting was used between the sixteenth and nineteenth centuries to remove deranged humors from the patient's body. The procedure was typically performed after other remedies (e.g., the administration of emetics, purgatives and enemas) failed to improve the patient's condition—'Although it is not up to us nurses (I must say it in passing) when doctors have applied all these remedies and others, and they are not sufficient, they usually do the bloodlettings' (Fernandez, 1625, p. 101). While the barber or surgeon in later centuries performed the procedure, nurses were required to understand the clinical indications for the procedure, such as fever, abdominal pain, flank pain and prolonged epistaxis. Nurses were also

expected to understand circumstances in which the procedure was contraindicated. For example, Obregonian nurses were instructed:

> And as doctors usually order that bloodletting be done to a patient, and after they have gone [the patient] begins sweating, or vomiting in big quantities, or having diarrhoea, in such circumstances no bloodletting must be done, except if the doctor orders it with such conditions. (Fernandez, 1625, p. 143)

In the eighteenth century, some authors, such as Serain (1777), indicated that the nurse should be able to perform the procedure: 'It would be useful for a nurse to bleed, in order to supply [act as] a surgeon in an urgent case; but at least they must know how to repeat a bleeding, or, as they say, reopen the vein' (p. 72). Others also shared this belief with the Royal Hospital of Santiago's (1804) *Constituciones*, indicating that bloodletting was an advanced practice performed by surgical nurses. Nonetheless, by the nineteenth century, the use of bloodletting as a routine treatment steadily declined. During this period, bloodletting was reserved for more serious conditions: 'General bleeding is rarely suitable; it is used only in young and blood [temperament] subjects, and when the fever is very intense, the pulse very full, and local symptoms are very pronounced' (Anonymous, 1836a, p. 28).[82] In circumstances in which bloodletting was considered too risky, other less invasive procedures (e.g., leeching and vesicatories) were implemented to rid the body of accumulate humors. Although bloodletting was less popular in the nineteenth century, nurses of this era were still encouraged to have an understanding of suitable veins for bleeding:

[82] Humoralist medicine believed there were four types of temperaments displayed in people—sanguine (blood), melancholic, phlegmatic (lymphatic) or choleric (bilious). A person's temperament was determined after considering their physical and personality traits and the composition of their body's 'solids and liquids' (Murray, 1870, p. 15). A person with a sanguine temperament was considered to have a strong and athletic physique with large blood vessels and 'were rarely ill under the age of fifty-five years' (Murray, 1870, p. 19).

> The veins of the arms most important to know are those which serve for bleeding; they are at the fold of the elbow and are four in number, namely: inside, the cubital or basilica; outside, the cephalic or radial; between the two, [are] the diane-basilica, and the cephalic median, which meet in the form of a Y in the middle of the fold of the elbow. (Anonymous, 1836b, p. 60)

> The most important vein in relation to bleeding is the so-called saphenous vein, it has its roots on the internal side of the foot; it rises at the front of the medial malleolus, vulgarly called the ankle of the foot, and is surrounded in this place by many cellular tissue; this is also one that we can open with a lancet. (Anonymous, 1836b, p. 63)

The nurse was required to assume numerous tasks before, during and after the bloodletting procedure. Prior to the commencement of the procedure, the nurse was required to ensure all equipment used in bloodletting (e.g., bandages, bleeding cups, lancets, linen and protective sheeting) were available: 'All things necessary for the bloodletting must be kept ready even before the arrival of the surgeon, so that the patient is not disturbed by the search for the same' (Gedike, 1837, p. 125). Other preparation tasks performed by the nurse included ensuring their limb was free of clothing and positioning the patient into a Fowler's position close to the edge of the bed so that the limb being bled was able to hang over the side.

Nursing responsibilities during the procedure included estimating blood loss using a formula such as 'in one minute about one ounce of blood runs out' (Schmidt, 1831, p.106) and monitoring for signs of patient compromise such as syncope. The management of syncopal episodes remained relatively unchanged during the epoch, with Fernandez (1625) recommending:

> Furthermore, should the patient faint, the nurse should have water, as cold as possible, ready, in order to fill their mouth with it as soon as the bloodletting is done; when the water gets warm, [the patient] should throw it out and take another swig, and [the nurse] should sprinkle

> their face with it. If, having done this, [the patient] continues to faint, the barber should close the vein straightaway. (pp. 143–144)

A similar management strategy was recommended in the nineteenth century, with Gedike (1837) advising the nurse to place smelling salts close the patient's nose while also 'sprinkling his [the patient's] face with cold water, [and] letting him drink some cold water' (p. 127).

After the procedure, the nurse assisted with bandaging the arm, returned the patient to a comfortable position, gave them a cup of broth and remained with them to observe for signs of deterioration, such as a sudden loss of consciousness or rebleeding:

> After bleeding, she [the nurse] will not leave the patient, fearing that he [the patient] will fall into weakness; she will make sure the bandage does not release, or if the blood does not cease flowing. (Serain, 1777, pp. 71–72)

Any strikethrough of blood was managed by either tightening the bandage, reinforcing the first bandage or applying additional compression. The nurse was also expected to monitor the patient for signs of over-compression, such as paraesthesia in the patient's fingers. In such instances, the nurse was instructed to slightly loosen the bandage and that 'the limb must be raised and the surgeon summoned' (Gedike, 1837, p. 127).

Earlier nurses, such as the Obregonians, were also advised to monitor for possible poor practices by the barber. Where substandard practice was observed, nurses were expected to advocate on the patient's behalf. For example, when the patient's bleeding capacity was compromised by poor positioning, the Obregonian nurse was expected to take corrective action:

> Because bloodletting is carried out in these fevers, the nurse needs to note the way the patient has to be placed for bloodletting, because some barbers usually pull their arm up high and

> keep their body low, and this is one of the greatest errors made to this day; thus, the patient needs to sit up, with their arm a little fallen. (Fernandez, 1625, pp. 142–143)

The Obregonian nurse was also expected to oversee the barber's phlebotomy technique: 'The nurse should take care every time bloodletting is done to the patients, to remind the barber to break the vein well, because much harm ensues from breaking it poorly' (Fernandez, 1625, p. 143). This need to act as advocate disappeared in later texts, possibly indicating surgeons became more adept at bloodletting than were their predecessors. Nonetheless, it may also have disappeared as a result of the progressive disempowerment of nursing status.

6.3.2.2 Leeching

Leeching was a conservative form of localised bloodletting used to treat a broad range of conditions, including teething, gout, haemorrhoids, headaches, delirium, dizziness, respiratory conditions, gastrointestinal disorders and localised swelling. Earlier texts indicate that the nurse assisted the barber to undertake leeching by preparing the leeches and equipment and monitoring for blood loss intra- and post-procedure. While these early nurses did not routinely perform the procedure at this time, there was an expectation that the nurse had a thorough understanding of the overall process:

> Although it is not part of our brothers' profession to apply cupping glasses or leeches, it will be good to state their principles here, so that the practising barbers who serve at hospitals may learn, and our brothers know about these principle, in order to see when they carry out their duties well. (Fernandez, 1625, p. 156)

Possessing such knowledge also allowed early nurses to perform leeching during emergencies and to advocate on the patient's behalf:

> although many barbers say that they cannot be applied without scented water or pigeon or chicken blood, it is an invention; because for them [the leeches] to get attached it is only

> required that the area be very clean, and [washed] with hot water. (Fernandez, 1625, pp. 183–184)

By the nineteenth century, leeching had ‘almost become fashionable’, particularly for at-risk age groups such as children or the elderly (Schmidt, 1831, p. 101). Corresponding with this increase in popularity, the use of leeching regularly featured as a safer alternative to bloodletting in the later texts. Some nineteenth-century authors, such as Gedike (1837), shared similar sentiments to those of Fernandez about the nurse’s role in leeching: ‘Applying leeches is actually one of the surgeon's jobs, but a nurse must know how to handle it’ (p. 129). Nonetheless, other authors indicated that the nurse was capable of undertaking leeching after appropriate instruction:

> Nurses should be responsible for the application of leeches; but their ignorance in this respect often requires the use of foreign hands [? surgeon], multiplies the expense and sometimes delays the use of a remedy, the effectiveness of which may depend on the moment when it is employed. (Carrère, 1786, p. 121)

Therefore, nurses were expected to understand each stage of the leeching procedure, with most authors detailing general instructions regarding (see Table 6.5).

Table 6.5: Nursing considerations prior to, during and after leeching

Procedural stage	Clinical consideration	Example instructions for the nurse in the peri-leeching period
Pre-procedure	Appropriate leech selection	'choose those which are long and slender, with a small head, a green back, striped with yellow or spotted with black, and with a slightly red belly; we must reject those with a large head, sometimes lanuginous, and the back striped with blue stripe. The first are found in running waters, and the latter in stagnant waters; these are usually venomous' (Carrère, 1786, p. 121).
	Additional equipment	The nurse was required to gather necessary equipment prior to performing the procedure, including paper, a glove or piece of cloth to protect the nurse's fingers during leech attachment; cupping glasses or other vessels to collect the blood; linen; and water/vinegar to clean the skin pre- and post-procedure.
	Patient positioning	This was dependent on the body part to be bled—the nostril, crown of head, around the anus or directly on a haemorrhoid. In the case of perianal application, positioning was explained as: 'if the patient is very skinny, they shall be placed on their side; the best [position] is face down, with a pillow for the chest, and if that were not possible, on their back, with a person holding their legs and lifting their knees, in such a way that their heels come to their buttocks, and about one foot over the bed once the pillow has been removed; this is the best way to apply them to skinny people, and to those who are greatly troubled and frantic' (Fernandez, 1625, p. 183).
Intra-procedure	Skin preparation	Prior to applying the leeches, hair was removed from the intended attachment zone. The skin was cleansed to remove sweat and exudate 'by washing [the area] with soap and then rinsing with water carefully' (Gedike, 1837, p.131).
	Increasing likelihood of attachment	'When the leeches are being put on, the part to which the leeches are laid must first be rubbed by hand to give it some redness, or rubbed with a cloth dipped in warm water. If this cannot be done, moisten the part with warm milk, sugar water, a little blood, &c.' (Martin, 1832, p. 50).
	Precautions during the application process	'When applying the leech, it must be avoided that it attaches itself to the hands of the one who applies it, one must at the same time prevent it from slipping by keeping it firm enough so that it cannot escape and can be presented to the part, and yet not squeeze it too strongly' (Carrère, 1786, p. 123).

Post-procedure	Length of bleeding time	‘As a rule, the doctor decrees that the bleeding from the stings of the leeches, after they have fallen off, will be maintained for a longer time, for the most part for half or even an hour’ (Gedike, 1837, p. 133).
	Risk mitigation	‘When the leeches are applied to the haemorrhoids, it is necessary to ensure that they do not enter the base of the intestine, where they may produce a haemorrhage; it is possible to prevent this accident in the leeches with a thread, that can be held in the hand or attached to the patient’s thigh; if however, they creep into the intestine, and then the patient must be immediately be given a simple water enema, in which a certain quantity of salt is dissolved, this is repeated until the leeches are detached and discharged’ (Carrère, 1786, pp. 123–124).
	Detachment process	‘If one believes that the loss of blood is sufficient, and the leeches do not detach by themselves, one can try to make them fall off by giving them a few light strokes; but they never can be torn off because their suckers could become stuck’ (Schmidt, 1831, p. 110).
	Managing haemostasis	Compression was used to manage delayed haemostasis: ‘Leeches, which are placed on the neck, or on the abdomen, bleed the most easily too strong. The danger which may result from such excessive rebleeding, especially in children, necessitates the appointment of a surgeon. Meanwhile, until the arrival of the same, the nurse must try several things to stop the bleeding. First, he places a compress on the bite wound, dipped in cold water and vinegar, and changes it frequently’ (Gedike, 1837, p. 135).
	Monitoring	‘Because of the great mortal danger, which may be caused by rebleeding, especially in children, and also in other patients, it is absolutely necessary for the nurse to check [the wounds] while the patient is sleeping’ (Gedike, 1837, p. 136).

Such information indicates that the pre-professionalised nurse was expected to use higher-order thinking skills, such as problem-solving and clinical reasoning, to troubleshoot any difficulties experienced during the leeching procedure.

6.3.2.3 Vesicatories

In the late eighteenth century, newer treatment procedures were incorporated into nursing care, such the use of vesicatories. Vesicatories, a type of specialised plaster used to produce skin irritation and/or blistering, were revered as a critical remedy: 'If any means of life-saving has greater powers and produces more striking effects, it is certainly the blistering and reddening agents' (Schmidt, 1831, p. 97). This therapy, particularly when blistering was used, was believed to 'act on the whole body' by drawing out deranged humors (Greiner, 1809, p. 73). Clinical indications for their use included localised oedema, idiopathic ulceration and non-specific or unexplained pain. While a medical order was generally required for all wound care including vesicatories—'the doctor always determines its size, as well as the spot where it should be placed' (Martin, 1832, p. 47)—it was customary that nurses could initiate such therapies if the doctor was absent. For example, nurses working in rural areas 'could represent the position of the surgeon' (Schmidt, 1831, p. 97). Therefore, nurses needed to be aware of the general features and principles of vesicatory plasters (see Table 6.6).

Table 6.6: Sample of the general features and principles of vesicatories, late eighteenth to mid-nineteenth centuries

Topic	Summary
Therapeutic agent selection	The choice of ingredient was dependent on whether erythema (e.g., honey, ammonia or mustard powder) or blistering was desired (cantharide-containing 'Spanish fly patches'). The active ingredient was painted on a piece of canvas/leather and secured on the skin with a bandage.
Placement on the body	While a vesicatory could be placed anywhere on the skin, advice was provided regarding site selection. For example, if a vesicatory was to be applied to the lower leg, the nurse was expected to place it 'on the calf, a little more inward than outward, two to three fingers from the hollow of the knee' (Schmidt, 1831, p. 97).
Skin preparation	Shaving the intended area for application was recommended because this 'helps to avoid the painful pulling of the hair when removing the plaster' (Schmidt, 1831, p. 98). Vigorously rubbing the skin 'with a thick cloth soaked in warm vinegar' was also recommended to stimulate blood flow to the region (Serain, 1777, p. 67). Nurses were encouraged to continue with rubbing even if pain was caused because 'It is even good that he [the patient] suffers a little while he is being rubbed' (Serain, 1777, p. 67).
Length of application	The length of application was dependent on the active ingredient, its desired effect (erythema or blistering) and the patient's skin integrity. For example, mustard powder vesicatories were typically applied for '15 to 20 minutes' in adults (Gedike, 1837, p.111). In contrast, 'Spanish fly patches' were left intact for up to 12 hours in adults to cause blistering (Gedike, 1837). The resultant blister was then drained by creating an incision on its inferior aspect.
Wound care following the removal of the vesicatory	Blisters were drained by creating an incision on its inferior aspect. A linen compress was then used to collect the exudate because it was believed to contain 'corrosive properties' and be a source of skin rashes (Gedike, 1837, p. 113). Cold milk or a lead-acetate dressing was applied to the treated area to reduce pain and limit further blistering (Greiner, 1809). The wound was then dressed with either 'cabbage leaves', 'fresh, unsalted butter' or a thin piece of canvas painted with 'deer tallow' (Schmidt, 1831, p. 99). Lead or rosewater ointment could also be applied to promote wound healing (Gedike, 1837).

6.3.2.4 Other procedures

While bloodletting, leeching and the application of vesicatories were the most popular procedures cited in the corpus, nurses were also involved in a diverse array of other specialised procedures. Table 6.7 provides an overview of these other procedures, as described in the seventeenth to mid-nineteenth century sources.

Table 6.7: Overview of other specialised procedures, seventeenth to mid-nineteenth centuries

Category	Procedure	When performed	Clinical indication	Example of nurse's role
Advanced external remedies	Application of pigeon or puppy to head	Seventeenth century	A variety of conditions, including head colds	'First, the nurse shall remove all the hair from the head as explained in the previous chapter … so that the blood does not flow down the patient's face and eyes. After this, the nurse will grab the young pigeon or puppy, neither very big nor very small, about a month old, and the diligent nurse will cut along the mid-backbone with a sharp and piercing knife near the patient's bed so that it does not get cold' (Fernandez, 1625, p. 14).
	Burns treatments	Seventeenth to nineteenth centuries	Various degrees of burns	The nurse was required to: 'Apply, immediately, linen wet with spirits of turpentine, and repeat as it dries. If the burn is bad, after applying the above, prepare a liniment as follows. Take common rosin [pine sap] as much as you please. Melt it with about a fourth of its size of hog's lard or mutton suet, or fresh butter, and then add as much spirits of turpentine as will make it, when cold, of the consistence of thick honey. Apply this pretty freely on rags, to the parts burned, even if the skin is off. If blister have risen, snip them and let the water out first' (Johnson, 1819, pp. 167–168).
	Catheterisation	Nineteenth century	Urinary retention and instillation of medicaments into the bladder	'If, in the case of the sick is a female and urine needs to be drained through a catheter, it would be good if the nurse could perform this operation … [to limit] an exaggerated shame of the patient' (Greiner, 1809, p. 61).
	Estufa (sweat-boxing)	Seventeenth century	To induce sweating for the treatment of bubonic plague	'At the time when the sweating needs to be applied (which must always occur while fasting) half a *cuartillo* [about 250 mL] (properly measured) of strong bramble water, very hot; before the patient drinks it, they [the nurse] shall place a warm blanket to cover their [the patient's] whole body, which has to be between the mattress and the sheet wherein the patient has to lie down, naked; and for reasons of modesty, covered with the ends of the same sheet, and if it were a woman, for even more cover, a sheet may be left on top until she is covered with

				the sweat box; once she has been covered with the sweat box, it can be removed from one end' (Fernandez, 1625, pp. 211–212).
Resuscitation methods	Expired air resuscitation	Eighteenth to nineteenth centuries	Carbon monoxide poisoning and attempted hanging	'The nurse takes over the business of insufflation, by drawing as much air through a deep breath as they can, holds their mouth over the previously wiped mouth of the deceased as quickly as possible, and blows into it while closing the [deceased's] nose … The nurse repeats this procedure a few times after taking several deep breaths each time' (Gedike, 1837, p. 204).
	Tobacco enema	Eighteenth to nineteenth centuries	Varied, used to arouse those with a decreased level of consciousness (e.g., near-drownings and suicide attempts) or to the deceased	'One sometimes finds unhappy fellow human beings, who stunned by grief and profundity, hang themselves. The nurse who is free from prejudice should not be afraid to: 1) As fast as possible, to cut loose the rope, and to apply the general means of revival, together with those that have been described at the impact …. 3) [Apply] the above-mentioned general life-saving appliances, especially flannel rubbing, and the tobacco enemas, are also useful in this case' (Mai, 1784, pp. 153–154).
Surgeries	Assisting with surgical procedures	Eighteenth to nineteenth centuries	Varied including amputations, excisions and autopsies	'During the operation, they [the nurse] are attentive to every hint of the surgeon, and seek to harass him as little as possible. After the operation they collect all the cloths that have been necessary … purify the room, and behave exactly according to the instructions of the surgeon' (Schmidt, 1831, p. 112).
	Dry cupping	Seventeenth century	Varied, to treat imbalanced humors in several conditions, such as epistaxis, flatulence or apoplexy	'To apply the cupping glasses well, the barber … needs to have the number of cupping glasses the doctor has ordered before they [the nurse] prepares the patient, which shall be face down, with a pillow beneath the chest' (Fernandez, 1625, p. 178). During the treatment of epistaxis where the doctor was absent: 'If the flow does not stop with these remedies, the diligent nurse shall take care to note from which nostril the blood comes out; if it per chance flows out of the right nostril, a large cupping glass will be placed on the liver, which is situated on the right side, one finger below the so-called false ribs. If the blood comes out of the left nostril, the cupping glass will be placed on the spleen, which is located on the left side below the false ribs until the flow ceases; if the flow comes out through both nostrils, one

	cupping glass will be placed on the liver and another one on the spleen’ (Fernandez, 1625, pp. 21–22).

6.4 Preventing Complications

The second theme of a *Thousand Nameless Acts* explores the nursing tasks that were performed to help prevent complications at each stage of a patient's illness. Accordingly, tasks, such as the close observation of the patient and implementation of measures to maintain a safe clinical environment, were routinely conducted by the pre-professionalised nurse (see Table 6.8).

Table 6.8: Themes and subthemes—preventing complications

Theme	Subthemes
Restoring health	Preparing and administering therapeutics Specialised clinical procedures
Preventing complications	Assessment and observation Maintaining a 'safe' environment
Promoting comfort	Easing spiritual and emotional distress Preserving the patient's dignity Encouraging adequate sleep and rest

6.4.1 Assessment and observation

One of most important tasks of pre-professionalised nurses was the collection of clinical data through assessing and observing the patient: 'The nurse must constantly observe the sick, how he [the patient] is, the sickness as it is, what accidents [events] occur, [and] what effects the drugs have' (Greiner, 1809, p. 18). The need for vigilant observation was even more pertinent during serious illnesses: 'In no illness is the diligent observation of the nurse more necessary than in those which by their nature lead the patient in a few weeks either to the grave or to the desired recovery' (Mai, 1784, p. 89).

Table 6.9 provides an overview of types of routine observations performed by nurses between the sixteenth and mid-nineteenth centuries.

Table 6.9: Assessment tasks performed by nurses—sixteenth to mid-nineteenth centuries

Sixteenth century[1]	Seventeenth century	Eighteenth century	Nineteenth century
Skin checks during admission Observing patient's tolerance to diet and remedies Monitoring for deterioration (e.g., signs of death)	*General assessments:* Skin checks Emotional wellbeing Sleep pattern Elimination pattern Fluid status *Monitoring for deterioration:* Breathing changes Oedema Inflammation Lethargy/weakness Decreasing LOC[2] Delirium/agitation Dehydration Wounds Anorexia *Pre-remedy checks:* Pulse LOC Last bowel motion Oedema Delirium Fever/rigours	*As for the seventeenth century plus:* Observation of body-system specific signs and symptoms (e.g., head, neurological and special senses) Cardiorespiratory Gastrointestinal, renal and reproductive health Upper and lower limbs Mental illness Integumentary *Parameters for pulse and respiratory rate are introduced* *Signs of death are introduced* *Environmental considerations:* Room temperature Room ventilation Room lighting	*Observation of:* Breathing pattern Faecal elimination pattern Fluid status Gastrointestinal symptoms Presence of pain Presence of tremors Pulse[3] Signs of fever Skin integrity Sleep pattern Sputum production Urinary elimination pattern *Signs of the death expanded to incorporate cessation of breathing and pulse.* *Environmental considerations:* Room temperature Room ventilation Room lighting *Intra- and post-procedure monitoring:* Hypovolaemia

	Locating anatomical landmarks for topical agents *Intra- and post-procedure monitoring:* Hypovolaemia Syncope Blood loss	Syncope Blood loss

1 This limited scope is likely attributable to the nature of the sources analysed (both were hospital *Constituciones*);.2 level of consciousness; 3 not all authors believed it was a nurse's role.

The information gathered through such observation served two purposes: a) it enabled monitoring and reporting, and b) it permitted the nurse to engage in surveillance.

6.4.1.1 Monitoring and reporting

Monitoring for changes in the patient's condition was a principal task of early nurses. Nurses were required to report any observed improvements or deterioration in the patient's health status to other members of the healthcare team, such as the treating physician, barber, surgeon and apothecary. The reporting of such information enabled the modification of treatment regimens to meet the patient's dynamic health status:

> The nurse is the mediator between the doctor and the patient, and through their permanent presence in the vicinity of the patient, has the best opportunity to closely observe all the individual coincidences of the disease, which are of great importance to the physician. (Gedike, 1837, p. 150)

Evidence of such monitoring was apparent throughout the corpus. For example, in the sixteenth century, nurses were expected to conduct general assessments, such as observing for *accidentes* [accidents] in which case the doctor was to be notified, or signs of impeding death, in which case the chaplain was to be notified (Anonymous, 1590, p. 7).[83]

Seventeenth-century nurses were engaged in more specific forms of assessment, such as obtaining a health history during the admission process:

> When receiving the patient, the nurse will take care, particularly if the patient is fatigued, and cannot speak: [to ask] those who brought him, or those who came to visit, to say how many days it has been that [the patient] has been ill, and what remedies have been carried out, so

[83] The word *accidente* [accident] has a broader meaning in Spanish. As well as referring to an unfortunate mishap, it also describes a 'severe symptom that occurs unexpectedly during an illness' (Royal Academia Espanola, 2019).

> that when the doctor comes [the nurse] may give an account, and once this has been received, he may go ahead with the same remedies that were used. (Fernandez, 1625, p. 118)

Anatomical landmarking was frequently used by the Obregonian nurses to accurately locate the site for topical remedies. For example, when applying *populeón* ointment to the patient's temples to help facilitate sleep, the nurse was instructed that:

> The temples are situated on the temporal muscles, one on the right and one on the left side, two fingers away from the eyebrows towards the ears; in this area one can feel the motion and pulse of an artery. The ointment must be applied here and all over the forehead.[84] (Fernandez, 1625, p.17)

They were also required to be more vigilant in their monitoring, such as observing the timing and frequency of fevers:

> The nurse shall take care to note what time the tertian comes to the patient in order to tell the doctor, so that he can indicate what time the purgative must be given, because most of the health and remedies for patients depend on this [information]. (Fernandez, 1625, p. 119)[85]

During the eighteenth and nineteenth centuries, nurses were expected to gather observational data while performing routine cares. For example, Mai (1784, p. 76) urged the nurse to observe for signs of venereal disease (e.g., 'genital warts and small outgrowths, like red snails') between the buttocks while administering an enema. Some authors during this period produced a list of expected observational data that must be documented and/or reported to the doctor. Table 6.10 provides an overview of the observations that were expected to be performed by the nurse.

[84] *Populeón* was a soothing ointment that became popular after the fifteenth century. It was made with the buds of black poplar, pork lard, red and opium poppy leaves, belladonna and other plants. *Populeón* was also used as a haemorrhoid treatment (Calvo-Munoz, 2013).
[85] Tertian denotes an intermittent or paroxysm fever that recurs every third day, such as in active malaria.

The nurse was also expected to monitor for signs and symptoms associated with specific conditions. For example, when monitoring for 'head' conditions, Gedike (1837) recommended that the nurse observed 'whether the eyes have become more sensitive, painful and irritating to the light, and whether the patient's hearing has changed' (p. 157). As well as monitoring for specific symptomology, early nurses were also encouraged to observe for other potential cues: 'yawning, indecision, pandiculations, general or uneasy anxieties, nausea, vomiting, convulsions and convulsive movements, hiccups, delirium, drowsiness &c.' (Carrère, 1786, p. 101).[86]

The nurse, in fulfilling the monitoring role, became the eyes of the physician:

> When the doctor returns, he must be able to tell him all this faithfully and sincerely, and be able to answer all the questions he has asked. The doctor can then … [be] assured that he will receive a detailed and reliable medical history. (Greiner, 1809, pp. 18–19)

Despite collecting such significant data, nurses of this era were usually discouraged from acting on this information. Nurse-initiated changes to the prescribed treatment regimen were perceived as 'interference' with medical orders (Longshore, 1842, p. 25).

[86] A pandiculation is the stretching and stiffening of the limbs and trunk that is observed during transitions in the sleep–wake cycle. It can also be observed in several medical conditions (Walusinski, 2009).

Table 6.10 Routine monitoring performed by the nurse, circa late eighteenth to mid-nineteenth centuries

Observation	Sample instructions or rationales
Breathing pattern	'The nurse must observe whether the patient breathes lightly or with complaint, whether he feels anxiety or pain while breathing, whether the breath is wheezing, whether the patient may have to sit upright in bed because of difficulty breathing … whether the nostrils are moving while breathing and finally whether the breath has an unpleasant, or even disgusting smell' (Gedike, 1837, p. 154).
Faecal elimination pattern	'Observe with attention the number of stools the patient has rendered; their quantity, consistency, colour, and smell; if they are bloody, if they contain worms: the ease or difficulty that the patient has had in rendering them' (Fodéré, 1815, pp. 52–53).
Fluid status	'The state of the tongue often directs the physician, is it clean, or coated with white silt' (Carrère, 1786, p. 98). 'One must pay close attention to whether the thirst is very great, especially at night, or, on the contrary, is absent, and the patient may yet be thirsty if the tongue and lips are dry' (Gedike, 1837, p. 155).
Gastrointestinal symptoms	'It is worth noting whether the patient has no appetite, or on the contrary an unusually strong appetite, so-called cravings, and whether the appetite is for ordinary [foods], or perhaps directed to unusual, unnatural things' (Gedike, 1837, p. 155).
Presence of pain	'Whether the patient has complained of pain, where and in what way' (Martin, 1832, p. 53).
Presence of tremors	'Whether there is trembling on in his hands or the tendons of his fingers jump' (Schmidt, 1831, p. 117).
Pulse[1]	'The knowledge of the pulse is indispensable; it leads us to appreciate the changes and variations, to establish the course which must be followed in the administration or suspension of prescribed remedies,[and] to make the physician aware of changes which have occurred during his absence' (Carrère, 1786, pp. 70–71). 'The patient's arm must be placed so that it is, like the fingers, rather extended, than folded, ... the three fingers are applied on the artery, that is, the index, and the two that follow, having them together, and parallel by their ends … keep your fingers applied long enough to feel forty or fifty pulsations: when one has acquired a great habit [experience] of the pulse, a lesser number of pulsations are sufficient to appreciate the state' (Carrère, 1786, pp. 71–72).
Signs of fever	'Whether sweat is found on the parts of the body or the whole body, whether he [the patient] is hot or cold and what does he smell like' (Schmidt, 1831, p. 117).
Skin integrity	'In the great diseases, especially if they are long, the compression of the body and friction imperceptibly warm the buttocks, give rise to redness, produce excoriations, which often become gangrenous and have unpleasant leaks' (Carrère, 1786, p. 100). 'Whether there are any tumours, ulcers or rashes on the body, nose, tongue, genitals and anus' (Martin, 1832, p. 53).
Sleep pattern	'How the patient behaves at night, calm or uneasy, whether he sleeps a lot or little, whether he often snores in his sleep, or grinds his teeth, and speaks in his sleep, crawling constantly with his fingers, hunting for imaginary mosquitoes' (Schmidt, 1831, p. 117).

Sputum production	'Make an accurate report to the doctor, [about] the frequency, the degree, the more or less violence [severity] of the of the cough that normally accompanies expectoration … the colour, consistency and the quantity of the latter, whether they are … clear, frothy … thick … whitish, yellowish, greenish, dyed with blood, [or] foul-smelling or odourless' (Fodéré, 1815, pp. 53–54).
Urinary elimination pattern	'We must observe the quantity, odour, colour, and nature, that is to say, if they are more or less abundant and proportionate to the drink, foul or with any other odour ….whether they are … oily, cloudy or laden with sediment or deposits' (Carrère, 1786, p. 94).

[1]Not all authors believed pulse assessment was within a nurse's scope of practice.

6.4.1.2 Surveillance

Surveillance is the act of using observational data to plan and modify nursing interventions to address the patient's current condition. It relies on the nurse's ability to interpret and synthesise collected information to formulate a timely course of action. Examples of nurse surveillance were found in texts such as *Instruccion de Enfermeros* (Fernandez, 1625) and *Manuel pour le Service des Malades* (Carrère, 1786), indicating at least some nurses were encouraged to engage in this higher-order observation skill in the seventeenth and eighteenth centuries.

Examples of nurse surveillance in *Instruccion de Enfermeros* focused on enhancing the Obregonian nurses' ability to interpret clinical data so that previously prescribed treatments could be safely modified in the absence of medical staff. To make an informed decision about the best treatment course, the Obregonian nurse was first expected to analyse multiple clinical cues. For example, when planning the timing of a purgative for a patient experiencing tertians, the Obregonian nurse was encouraged to first consider:

> [whether the patient had] fasted for at least four or five hours after a meal, and it is advisable [for the patient] to have defecated that night or the day before, and if they have not, give them an enema. The nurse must also check the patient's pulse and consciousness while giving the purgative, because it has very often been seen that, them being free from a temperature, and with a good consciousness when the doctor has ordered it, and at the time of giving it, find him with an increase or an accident of fainting due to feebleness or other accidents that may occasionally occur to patients. (Fernandez, 1625, pp. 119–120)

Once these cues were collected, the Obregonian nurse was required to process this information to make a clinical judgement about whether the purgative should be administered:

> It is far more important to stop it than to place them in great risk of grave damage, and the nurse shall note the reason why he stopped it in order to advise the doctor. (Fernandez, 1625, p. 120)

Another example of nurse surveillance was identified in *Manuel pour le Service des Malades* (Carrère, 1786). In his section of pulse assessment, Carrère (1786) expected the nurse to not only be able to take a pulse, but also to be able to interpret if the patient had a 'natural pulse':

> This is the one where impulses resemble each other perfectly, will be felt in perfectly equal distances, frequent or slow, with softness, suppleness, and liberty, and which is, at the same time, seeming to make no strong effort. (pp. 72–73)

When making this decision the nurse was urged to incorporate several features of the pulse, such as its rate, rhythm, strength and equality, while considering the patient's baseline state:

> In the natural state, about sixty [pulsations] in a minute are recognised; this number, however, varies among the different individuals; there are some who do not experience fifty, and there are some in which they go up to seventy, even eighty; but these last are very rare. (Carrère, 1786, p. 73)

The nurse was also expected to be cognisant of several other factors that could cause pulse variances. A sample of these factors are presented in Table 6.11.

Table 6.11: Factors associated with pulse variances, as cited in Carrère (1786)

Factor	Anticipated changes to the patient's baseline pulse
Age	'The natural pulse is not the same in the various ages of life. That of the children is more frequent than that of the adults, and this one more than that of the old men' (p. 79).
Digestion	'Digestion often changes the course of the pulse, and produces varieties of it; we must avoid assessing it at this moment' (p. 81).
Exercise and movement	'Strong and violent movements, such as … exercise … a long, strong, or convulsive cough … and considerable vomiting, produce changes in the pulse; it becomes ordinarily much more frequent; but this frequency is so acute and ceases after a little rest, and it is only then that we must judge of the state of the pulse' (p. 82).
Gender	'The natural pulse is not the same in both sexes. For women it is, in general, more frequent, more lively, than in men; it may even be said that it is closer to that of childhood and youth; it is more susceptible of different changes, and more variable than that of men' (pp. 80–81).
Nervous conditions	'Nervous, spasmodic, convulsive diseases ordinarily make the pulse variable, obscure, [and] uncertain' (p. 82).
'Passions of the soul' (Emotions)	'The lively passions of the soul alter the pulse; they render it generally small, tight, convulsive, sometimes very strong, depressed, even unequal; do not judge it in this moment' (pp. 81–82).
Remedies	'The action of remedies alters the pulse, sometimes for a few hours, sometimes for whole days; it may be observed after bleeding, purgatives, sometimes even by simple enemas. This is not the point of judging the state of the pulse' (p. 82).
Temperament	'The diversity of temperaments still produces varieties in the pulse. It is generally strong, dilated, full and equal in sanguine temperaments, more or less close, uneven, irregular, complicated, and often obscure in melancholic temperaments' (p. 81).

Therefore, the nurse was expected to not simply take the pulse, but to interpret how the patient's current condition and treatments were affecting the assessment findings. As a result of this interpretation, the nurse was expected to independently evaluate and alter their plan of care in accordance to the patient's current condition, such as adjusting the timing and frequency of assessments, prescribed remedies or other procedures. Such adjustments were believed to increase the reliability of future assessments.

These two examples from the seventeenth- and eighteenth-century sources provide evidence that nurses were encouraged to use higher-order thinking skills, such as clinical reasoning and critical thinking, to interpret their observations and act on them accordingly. However, this expectation disappeared in the nineteenth-century sources. Instead, texts from this period reported that nurses who engaged in surveillance acted outside their scope of practice:

> Often, nurses are tempted to communicate their own views and convictions about the disease and its cause, and even to have a say in the disease itself out of spitefulness or self-condemnation, pretending that their ingenuity is the cause of the disease being discovered. This however, is entirely reprehensible, because it is not the nurse, but the doctor, who is to reflect on and judge the disease, and such a preoccupation by the nurse who does not understand anything … and distances themselves from their actual, important business of watching the patient closely. (Gedike, 1837, p. 151)

Limiting nurse surveillance during the nineteenth century had several ramifications for the emerging nursing profession:

- Nurses were being blamed for patient deaths rather than examining other contributing factors, such as the efficacy of remedies and treatments used during this period (i.e., medicaments now viewed as poisons—such as lead and turpentine—were popular at this time).
- As the need for obeying medical orders above all else increased, a deskilling of surveillance skills may have transpired because critical thinking and clinical reasoning were abhorred.
- The need for nursing's subservience to the medical profession potentially led to nurses feeling unable to initiate timely intervention in acute phases of deterioration, resulting in further cases of preventable deaths.

These by-products may have reinforced the stereotype of nursing ignorance.

6.4.2 Maintaining a 'safe' environment

Maintaining a 'safe' clinical environment was another key task of the pre-professionalised nurse. Nurses were required to undertake at least daily interventions that limited the risk of contagion in the sickroom or ward. A three-pronged approach to infection prevention and control was taken: improving air quality, ensuring cleanliness and limiting exposure.

6.4.2.1 Improving air quality

Foul air, known as miasmas, were believed to be the major causes of disease in this epoch. Miasmas were thought to be produced by stagnated water, decomposing organic matter (e.g., rotting food) and the waste products of a diseased human body (e.g., sensible losses such as urine, faeces, and vomit; and insensible losses such as sweat and exhalation). A critical infection control activity of the pre-professionalised nurse was to reduce the level of accumulated miasmas and contagions in the sickroom. This practice was thought to reduce the patient's mortality risk and was a key public health measure because air was considered 'the best life balm for living creatures' (Mai, 1784, p. 16). Consequently, the nurse 'above all' was responsible for taking 'care of the removal and avoidance of all impure, damp and rotten vapours in the room and its surroundings' (Martin, 1832, p. 4).

Basic miasma control measures implemented by the nurse included improving the ventilation of the room by opening doors and windows at regular periods, limiting the number of people in the room and promptly removing human excrement and other organic waste (e.g., rotting flowers and spoiled food) from the sickroom. Rationales normally accompanied the authors' recommendations. For example, while explaining the risk of rotting flowers, Greiner (1809) explained: 'Strong-smelling things fill the air with their exhalations, plants omit harmful air at night. The exhalation of many flowers in the room can cause sudden death' (p. 145). While

these control measures were found throughout the corpus, by the nineteenth century, these nursing tasks had become a scientific pursuit, with most authors dedicating lengthy discussions on how to maximise the purification process. Gedike (1837) provided strict guidelines that governed the process of air renewal:

> by opening the windows and doors. This is usually done only once a day during the winter, at lunchtime, but twice in the summer and later in the morning and afternoon … The windows must be secured in such a way that they cannot suddenly strike and the patient is terrified. Never open opposite windows and doors and corner windows. During the opening of the windows the patient is covered, a screen placed in front of his bed. (pp. 10–11)

To legitimise their claims, scientific terminology and principles were frequently incorporated into these explanations:

> Such pure air is called dephlogisticated air. This [air] is obtained by the chemical analysis of saltpetre; also, it can be collected from plants with much effort. In this air, a wax light burns brighter and faster than in common air. A man who inhales such an air feels a certain refreshment, a very special comfort. (Mai, 1784, p. 17)[87]

> There are also harmful admixtures in the air, which cannot always be overcome by the vital force of the organs of respiration, therefore [they] can have an injurious effect on the body. (Greiner, 1809, p. 140)

Fumigations became a popular nursing intervention in the late eighteenth and early nineteenth centuries. Fumigations were a more advanced method of purifying the air and was accomplished in three ways: 'to remove a foul odour from a room, to improve its air, and also to rid it of infectious diseases' (Gedike, 1837, p. 12). Substances that were burnt included

[87] Oxygen was once known as dephlogisticated air—air that had been deprived of phlogiston. Phlogiston was a fictitious element thought to cause combustion (Severinghaus, 2016; West, 2014).

vinegar, odoriferous plants and spices (e.g., dried juniper berries, mastic and cinnamon). Such substances were primarily used as a perfuming agent. When the patient was believed to be contagious, chemicals such as manganese oxide, lime, saltpetre and chlorine were burnt because they were believed to have 'the properties to annihilate the corrupt emanations that exist in the air' (Fodéré, 1815, p. 34). To protect against the potential complications arising from burning such chemicals, a doctor's prescription was required:

> Fumigations may never be used without the doctor's express prescription, because it can injure many patients, especially those who suffer from the onset of blood on the head or respiratory symptoms and coughing. Most damaging in this regard are amber, saltpetre, salt and especially chlorine fumigation, which later can induce haemoptysis and eye diseases. (Gedike, 1837, p. 12)

Precautions taken by the nurse when instituting the fumigation included locating it away from the immediate bed-space to minimise the risk of injury to the patient and placing a moistened handkerchief over one's nose and mouth to limit the risk of inhalation. The nurse was also required to monitor the strength of the fumigation because the vapour volume was indicative of its efficacy:

> If the smell of the vapours is pungent after spreading, or if there is coughing when it is inhaled, the fumigation has been too strong, and the lungs may thereby be harmed; on the other hand, one should not allow the vapours to develop too weakly, because otherwise they will not suffice. (Schmidt, 1831, p. 27)

6.4.2.2 Maintenance of a clean clinical environment

Maintaining ward/sickroom cleanliness was another infection control measure performed by the nurse. This preventive strategy was of such significance that most manuscripts across the three centuries contained sections on what and how the nurse should clean. Core cleaning

activities delegated to nurses in the sixteenth and seventeenth centuries included bed-making, sweeping and cleaning used utensils/equipment (e.g., medication cups, chamber-pots and spoons). For example, the Obregonian *Constituciones* indicates that the senior nurse was responsible for overseeing the cleaning tasks of the junior nurses:

> Make sure that the infirmary is clean, that the beds are made once every day, and that the comfort services [chamber-pots/urinals] are washed in the morning or afternoon, or more times if necessary, as it arises; and that the jugs in which they drink are cleaned and that their clothes are changed every eight days, and that [the] perfumes in the wards are refreshed from time to time, principally when commencing the Blessed Sacrament. (*Congregation of Bernardino de Obregon*, 1634, fol. 40–41)

A similar cleaning process was adopted in the eighteenth century, with the female senior nurse of the *Hospital de la Passion*—the women's hospital in Madrid—also assuming a supervisory role:

> They will watch and check, that the Nurses, who act at their order, will sweep the rooms at the established hours, make the beds of the sick, assist them with charity in their urgencies, and that they preserve with the greatest cleanliness the pots, pans, pottery, and other utensils, that exist in their corresponding destinations. (General Hospital of Madrid, 1760, p. 98)[88]

The 'established hours' of sweeping were shortly after rising at 0400 hours in summer and 0500 hours in winter and following each meal service (General Hospital of Madrid, 1760, p. 48). Such practices were thought to decrease the number of miasmas in the patient's room, thereby reducing the risk of others developing diseases (Carrère, 1786; Serain, 1777). In these earlier texts, vinegar or vinegar-water mixes were the preferred cleaning agent.

[88] Interestingly, Nightingale's (1858) advice on the ward's cleaning regimen closely resembles the recommendations in the earlier Spanish sources: 'In the morning, before dressing begins, and before the night-nurse goes off duty, all three nurses to clean the ward, make the beds, wash the helpless patients, &c' (p. 11).

Similar cleaning practices continued into the nineteenth century. Despite evolving scientific knowledge, cleaning practices remained influenced by miasma theory:

> Try to avert all impurities as much as possible, for example, while the chamber pot must always be near [the patient], it is empty, washed and pure, if it still gives off an odour, then infuse it with a little wine vinegar. (Greiner, 1809, p. 17)

> The sweeping out of the sickroom must be done as easily and quickly as possible, and at the same time as the airing, also taking into account in particular the space under the beds. It must be avoided to create dust, it is therefore advisable half of the broom be dampened a little, or quickly wipe the floorboards with wet towels. The room must not be made too wet, or even scrubbed, because the evaporation of the wet floorboards can have the worst consequences for the sick. Emptying of any kind [excrement] should not be allowed to stay in the hospital room too long. (Gedike, 1837, p. 32)

6.4.2.3 Limiting exposure

The third method used to decrease the risk of cross-contamination in the clinical environment was limiting the introduction of and exposure to infectious diseases. Strict admission processes to contain risk were noted in the seventeenth-century sources—*Instruccion de Enfermeros* (Fernandez, 1625) and the Obregonian *Constituciones* (Congregation of Bernardino de Obregon, 1634). These sources indicated that upon receiving a new admission, nurses were required to wash the patient's body, hair and clothes and cut the patient's hair and nails. This intervention was aimed at limiting the risk of lice infestation. However, Fernandez (1625, p. 128) also recognised that changing the patient's clothes could limit cross-contamination in 'serious illness such as smallpox, typhus and harmful fevers' as these items were believed to house 'harmful vapours'. Nineteenth-century authors such as Gedike (1837, p. 33) recommended similar hygiene practices. However, he noted that the nurse should first seek the approval of the doctor to initiate bathing the person in lukewarm water.

The location and type of bedding used was another basic infection prevention and control measure in the sixteenth and seventeenth centuries. Beds were spaced to decrease the risk of infection—presumably miasmas—spreading between patients (Congregation of Bernardino de Obregon, 1634). Straw mattresses were the preferred type of mattress material because they were believed to house less vermin than horsehair- or feather-filled mattresses. Their relatively cheap cost also allowed hospitals to burn the mattresses after use with a contagious patient and replace them at regular periods. For example, the Royal Hospital of Santiago de Compostela replaced their mattresses annually (Anonymous, 1590).

Soiled clothes and bed linen were believed to release miasmas; therefore, they were a key infection source in the sixteenth and seventeenth centuries. Whenever a patient was found soiled, the fouled materials were removed and laundered. Fernandez (1625) explained:

> now we will deal with whether, in the case of serious illnesses such as the smallpox, typhus and harmful fevers, it will be good to change the clothes if they are dirty; and the answer is yes, because the shirt has the harmful vapours that result from temperatures; if [the dirty shirt] were put on a healthy person, it would not take much for the ready person to catch it, thus much more the reason for the patient to catch it again? Therefore, it will be advisable to change their clothes, unless it is a day for a purge. (p. 128)

This practice lasted into the nineteenth century and continued to be influenced by miasma theory rather than contemporary principles such as the chain of infection. For example, while Fodéré (1815) recommended that nurses use tongs rather than their bare hands when handling soiled items, the nurse was advised to avoid laundering them in hot water straight away. The nurse was instead instructed to place the soiled items in:

> tubs always full of cold water, that you will renew for all the days of the duration of the disease: the towels and bedding must not be washed first in hot water, because the steam would hurt you. (Fodéré, 1815, p. 32)

By the eighteenth and nineteenth centuries, recommendations about how to prevent cross-contamination extended to the nurses themselves. Nurses were encouraged to perform a number of 'preventive' interventions to protect themselves from exposure to dangerous miasmas. These interventions were focused on improving the nurse's general health and limiting the risk of exposure and included things such as regular hygiene and diet. Table 6.12 provides an overview of the preventive principles and accompanying rationales used to guide nurses in protecting themselves from contagion.

Table 6.12: Recommendations to prevent exposure to miasmas, eighteenth to mid-nineteenth centuries

Preventive goal	Suggested intervention	Sample instructions/rationales
Decreasing susceptibility	Adequate sleep	'The nurse must not continually avoid sleep, nor should he try to delay it by consuming warm drinks over a long time. Long waking and the effort involved makes the body more irritable and prone to infection' (Gedike, 1837, p. 148).
	Adopting a calm and happy composure	'Fear causes many diseases: the one who is fearful must not be a nurse; on the contrary, confidence and courage have often been a powerful prophylactic' (Fodéré, 1815, p. 30).
	Consuming a nutritious and easily digestible diet	'Temperance in eating and drinking, especially protects against the risk of infection. Simple, nourishing and easily digestible foods are the best. Fresh meat is more suitable than smoked and salted, especially pork, and in general all fatty prepared food' (Gedike, 1837, p. 147).
	Frequent personal hygiene	Nurses 'are often the carriers of the infection: thus, when you have been with [a patient] who has measles, smallpox, scarlet fever, pertussis, or a fever …you wash the whole body and even the hair, change completely [your] clothes, before any communication with the outside and going into other houses' (Fodéré, 1815, p. 38).
	Exposure to fresh air and gentle exercise	'This free time after dinner you can turn to walking in clear air. The pure free air is one of the most indispensable things for the preservation of life, and therefore it is also the best preservative of health, and the most excellent remedy for contagious diseases, which is all the more beneficial if combined with moderate movement of the body at the same time' (Schmidt, 1831, p. 217).
	Regular changing and laundering of clothes	"It is important for them [the nurse] to prevent the putrid miasmas… [from] dwelling too long on their clothes and the habit [skin] of their bodies. For this purpose they must frequently change clothes, even if only the outer garments." (Carrère, 1786, p. 201).
	Strengthening the body	'strengthen the body by moderate use of irritating means, and thereby be able to withstand the influence of harmful influences sooner. A glass of wine, especially from the sour, Rhine wine … or the careful consumption of the brandy, is advised'(Greiner, 1809, pp. 25–26).

	Avoiding eating and drinking in the sickroom	‘Nurses should never dine in the hospital room … the miasmas mingle with the food and the saliva, which when swallowed can easily cause disease’ (Schmidt, 1831, p. 217).
	Avoiding the inhalation of toxic miasmas	‘vapours emanate from the body of the sick; for that purpose he [the nurse] turns his breath away, or restrains his breathing when one is obliged to yawn over the bed or on the patient himself; if the service [intervention] requires one to hold a breath too long, they can turn away a moment to take breath, always avoid inhaling when one has one's mouth and nose too close to the patient’ (Carrère, 1786, pp. 203-204).
	Avoiding wearing fur and other “rough” materials	Fur was more ‘likely to absorb the infectious substances’ (Martin, 1832, p. 14).
	Dealing with open wounds on the nurse’s hands	‘Be especially careful of his [the patient’s] ulcers, sweats, sweats, saliva, urine and so on, always cover sores on one’s hands with a plaster or bandage’ (Martin, 1832, p. 15).
Decreasing exposure risk	Expectorating saliva after handling the patient	‘If you have been in the vicinity of such patients whose fumes or breath are infected for a long period, you must not swallow your saliva’ (Greiner, 1809, p. 24). ‘They [the nurse] must be careful not to swallow the saliva; for the expectoration of saliva is a most necessary act with bad humors of the sick, because the venomous vapours combine with it [saliva], and when swallowed it would be carried into the stomach’ (Schmidt, 1831, p. 218).
	Limiting exposure to the cold	‘One must treat the body against the causes of illness … Excellent care should be taken … to avoid cold’ (Greiner, 1809, p. 25).
	Minimising touching the patient through the use of a physical barrier	Do not touch the sick with sweaty hands; but be careful, beforehand, to dry them, and even to dry them with a little dry almond paste, powder, or flour … In large contagions put on waxed taffeta gloves’ (Fodéré, 1815, p. 31).
	Regular preventive activities to exposed body areas and the mouth, especially before meals	‘to prevent the putrid miasmas … often wash their [the nurse’s] faces, arms and hands with fresh water, soapy water, water sharpened with a few drops of *eau-de-vie* [water of life] … and above all with a mixture of water of vinegar, and even better from time to time with pure vinegar’ (Carrère, 1786, pp. 201–202).

		‘It is expedient that the guard often rinses his mouth with wine vinegar, also washes his face and hands with vinegar, and sometimes smells of strong vinegar’ (Gedike, 1837, p. 149).
	Slowing the opening of bed covers	‘The vapours are always more concentrated and active in the interior the bed [under the covers], they develop and increase with the activity … that proceeds it. It is therefore essential to use precaution when opening the bed [covers] of the sick … to do it slowly and by degrees, while having attention to divert or hold one’s breath’ (Carrère, 1786, p. 204).

6.5 Promoting Comfort

The final theme of *a Thousand Nameless Acts* presents insights into early nursing interventions performed to improve patient comfort. Pre-professionalised nurses recognised that a person's health and recovery benefited through feeling comfortable throughout their infirmity. Nursing interventions that promoted patient comfort addressed three core aspects of psychosocial wellbeing: easing spiritual and emotional distress through the provision of pastoral support; preserving the patient's dignity through assisting with activities of daily living; and encouraging adequate sleep and rest (see Table 6.13)

Table 6.13: Themes and subthemes—promoting comfort

Theme	Subthemes
Restoring health	Preparing and administering therapeutics Specialised clinical procedures
Preventing complications	Assessment and observation Maintaining a 'safe' environment
Promoting comfort	Easing spiritual and emotional distress Preserving the patient's dignity Encouraging adequate sleep and rest

6.5.1 Easing spiritual and emotional distress

Spiritual and emotional distress was eased through the provision of pastoral support. Nurses were expected to undertake daily pastoral support with their patients. The aims of these activities were to convey their care for the person, make them feel safe and support their emotional and spiritual wellbeing. In the sixteenth and seventeenth centuries, most nursing tasks focused on the spiritual needs of the patient. Such activities undertaken by nurses included conducting regular prayer sessions and grace within the ward. For example, the Obregonian *Constituciones* describes the senior nurse responsibilities as:

> At dawn, they visit all infirmaries, and will make the sick thank God for the mercies received, and say with them one *Our Father* [the Lord's prayer] and *Hail Mary* for the state of the Holy Mother Church, and for the souls in purgatory. (Congregation of Bernardino de Obregon, 1634, fol. 41)

For dying patients, the senior nurse needed to ensure they received confession, communion (Viaticum) and extreme unction (now known as 'anointing of the sick'). A requiem mass was held the following Monday at the hospital's church for those who had died. For patients too unwell to attend, the nurses of each ward were instructed to ask their patients to say the *Lord's prayer* and a *Hail Mary* for the deceased.

Religious practices became less prominent in supporting emotional and spiritual wellbeing in the eighteenth and nineteenth centuries. While nurses were expected to be pious and religion was thought to produce 'much good', some authors highlighted the risk of 'ranting religionists' (Longshore, 1842, p. 19). Left unmonitored, these rantings were perceived as detrimental to patients' health because they could 'produce excitement of the mind by creating undue alarm, which can be productive of no good either spiritual or temporal' (Longshore, 1842, p. 19).

With nursing's progressive secularisation, diversional activities unrelated to religion became more commonly cited in the sources. Appropriate diversional activities the nurse could implement included short excursions to the garden, playing music and reading to the patient. Reading was particularly useful because 'by reading aloud to the patient, he will be able, in protracted diseases, to sweeten the sickness of his patient for some hours' (Greiner, 1809, p. 21). In terms of book selection, the nurse was urged to consider the patient's education and comprehension level. Light and simple narratives (e.g., amusing stories or travelogues) and poetry were recommended, whereas books that contained sensational or sensitive material were to be avoided. When caring for children, the nurse had 'a peculiar challenge to amuse and

manage her charge' (Hanbury, 1825, p. 15). Appropriate strategies to entertain children included creating craft activities and sharing humorous anecdotes. However, nurses were instructed to refrain from reciting 'nonsensical tales of ogres, ghosts and goblins' to children (Hanbury, 1825, p. 16). Protecting the patient from bad news, arguments or salacious gossip was another key pastoral support task of the nurse. Letting the patient hear or engage in such acts was viewed as 'the greatest evil' because this careless chatter was thought to provoke anxiety in or depress the infirmed (Schmidt, 1831, p. 7).

6.5.2 Preserving the patient's dignity

Early nurses were responsible for supporting patients with their activities of daily living in four key areas: personal hygiene and grooming, dressing, mobility and activity, and elimination and continence management. Assisting with such tasks helped preserve the patient's dignity during their illness by limiting possible embarrassment, and when possible, providing the person with a sense of normality.

6.5.2.1 Assisting with personal hygiene and grooming

The provision of hygiene care was a quotidian role of the pre-professionalised nurse. Hygiene cares were consistently performed by sixteenth- and seventeenth-century nurses upon a patient's admission to hospital. This intervention was used to check the skin integrity of the patient—the nurse would observe for signs indicative of a contagious skin condition—and reduce the introduction of lice into the hospital. However, this routine task was also to improve the wellbeing and comfort of the sick-poor through physical measures (i.e., the removal of dirt from the body) and psychological means (i.e., demonstrating concern for the patient and helping restore their dignity). The continuation of this practice throughout the centuries is evident, with this custom noted by Nightingale (1858, p. 84) as 'a very admirable practice' that routinely occurred at St Thomas' Hospital.

Bathing was also used as a medicinal remedy between the seventeenth and nineteenth centuries. These baths were considered a quasi-medical intervention—the type of the bath administered was individualised to the patient's condition. Consequently, the doctor provided input about factors such as the type of bath and whether herbs or other concoctions were added to the water. Nursing considerations for conducting the bath were focused on adhering to the doctor's orders (when given), the timing of the bath and maintaining safety for the patient while in the bath. In the seventeenth century, baths were available as either hot, cold or medicinal and were conducted prior to breakfast or 'at least four hours after meals' so the bath did not impede digestion (Fernandez, 1625, p. 69). The type of bath ordered was in accordance with humoralism and aimed at restoring the balance of humors. Seasonal adjustments were also made, such as ordering cold baths during summer (Fernandez, 1625, p. 71). After the bath, the patient fasted for at least one more hour because bathing was believed to impede digestion. Seventeenth-century nursing strategies to ensure safety for the patient included: checking the water temperature prior to the patient entering the bath to ensure it will not scald or overly cool the patient; rechecking the water temperature during the bath to prevent hypothermia; having the bath located close to the bed; and remaining with the patient during the bath in case of a syncopal episode. For the frail or thin patient, Fernandez (1625) also recommended placing a sheet in the bath that the patient could lie on so that they could be lifted out of the bath if they were too weak to exit it independently. After the bath, the patient was dried, dressed in a clean nightshirt and 'perfumed with rosemary and lavender' (Fernandez, 1625, p. 71).

In later texts, bathing a patient became progressively more medicalised. The rationales for why bathing was necessary were scattered with pseudo-scientific explanations about its therapeutic actions, such as its effect on the nervous system:

> It makes a gentle, but penetrating and invigorating stimulus to the skin, which is provided with innumerable nerve tissues. This pleasant feeling spreads over and through the whole

> body, keeping the nervous system in order, tuning it down if it is too strong, strengthening it if it is too weak. A certain consequence of this, in any case, is that the pulse slows down, and consequently calms the blood circulation. (Greiner, 1809, p. 82)

Greiner (1809) also believed that bathwater could be absorbed into the body via the skin's capillaries. As a result, bathing was thought to 'stimulate' the lymphatic system and increase the person's blood volume so that there was 'more moisture' in the body (Greiner, 1809, p. 82). Reasons were also proffered for why some areas of the body were more prone to odour than others. For example, Mai (1784) attributed malodourous armpits and feet to 'nature trying to dilute its own pungency' (p. 62). To counteract such 'deadly evil[s]', the nurse was encouraged to use warm cloths to open the pores of these areas (Mai, 1784, p. 62).

With increasing medicalisation, the dangers of incorrectly performing a bath became more ominous for the patient and nurse. The cited dangers of poor bathing techniques ranged from causing 'the greatest discomfort' to the patient (Schmidt, 1832, p. 79) through to careless nurses being equated to 'murderers' for their failure to follow medical orders (Mai, 1784, p. 82). A bath that was too hot was believed to cause a 'rapid and disorderly circulation', 'weak intestines', headaches, haemoptysis, anxiety and agitation (Greiner, 1809, p. 84). In contrast, a bath that was too cool was believed to result in vasoconstriction, suppressing exhalation, convulsion-inducing and 'other bad accidents' (Greiner, 1809, p. 84). More profound risks associated with bathing included the patient falling asleep and drowning or experiencing a stroke (Schmidt, 1831).

The nurse also needed to be mindful of possible contraindications for bathing because these increased the risk of bath-associated complications. Contraindications for bathing included the presence of haemorrhoids (Serain, 1777), gout (Mai, 1784), skin conditions including diaphoresis (Schmidt, 1831; Serain, 1777), seizures (Gedike, 1837), active bleeding (Gedike,

1837), menstruation (Gedike, 1837; Serain, 1777) or having eaten within three hours of the intended bath time (Schmidt, 1831). If the nurse identified a possible contraindication, they were expected to 'inquire again with him [the doctor], whether the bath should be taken' (Gedike, 1837, p. 83).

The dangers associated with poor bathing techniques resulted in nurses requiring a medical order for patient bathing by the nineteenth century. The nurse was dependent on the doctor to determine whether a patient should be sponged or bathed (Dieffenbach, 1832) and the type of bath to be used (Gedike, 1837; Schmidt, 1831). A whole body bath required the patient to be immersed in water up to their necks, whereas a half-bath involved the patient sitting on a chair or stool in the bathtub so that only the lower body (up to the navel) was immersed in water (Greiner, 1809; Martin, 1832; Schmidt, 1831). Medical orders were also needed for the duration of the bath (Gedike, 1837; Schmidt, 1831) with '20 to 30 minutes' being a general guide for adult patients (Gedike, 1837, p. 86). The doctor was required to remain in attendance for any bath that spanned longer than 45 minutes (Martin, 1832).

To limit the risk of temperature-induced adverse events, physicians also prescribed the bathwater temperature. Baths were typically ordered as cool, warm or hot; however, no consistent temperature guides were provided across the corpus. For example, a warm bath was considered 25°Re (Martin, 1832), between 20 and 30°Re (Serain, 1777) and between 26 and 28° Re (Gedike, 1837).[89] To maintain the prescribed water temperature, the nurse was expected to use a thermometer to regularly check and modify as required (Fodéré, 1815; Gedike, 1837;

[89] Temperature conversion from Reaumur to Celsius and Fahrenheit

Reaumur	Celsius	Fahrenheit
20°Re	25.0°C	77.0°F
25°Re	31.25°C	88.25°F
26°Re	32.5°C	90.5°F
28°Re	35.0°C	95.0°F
30°Re	37.5°C	99.5°F

Greiner, 1809; Mai, 1784; Schmidt, 1831). Alternatively, the nurse could also use their elbow to check that the water would not burn the patient (Gedike, 1837).

The nurse was expected to stay with the patient while they were in the bath. During this time, the nurse performed a range of other interventions. These interventions included maintaining the ordered water temperature by regularly adding hot or cold water, dry smoking the room to dispel miasmas, making the patient's bed, warming the patient's clothes and bed linen and administering medicinal drinks (e.g., hot teas) as ordered. The nurse was also required to continuously monitor the patient for adverse events, such as the patient feeling weak, fainting or experiencing a stroke. The occurrence of such adverse events was attributed to the damp environment and the 'oppression of the chest' that occurred upon entering the bath (Martin, 1832, p. 41).

Nursing interventions employed after the bath focused on limiting the patient's exposure to the cold and not letting the patient directly stand on a cold floor. Some authors, such as Greiner (1809) and Gedike (1837), offered more extreme ways to limit the patient's risk of developing hypothermia. These authors recommended that the patient be lifted from the bath and wrapped in a warm piece of linen prior to being returned immediately to the bed. Once the patient was in bed, the nurse would remove the damp linen and thoroughly dry the patient before wrapping them in a fresh blanket. 'Pleasurable conversation' (Greiner, 1809, p. 89), warm soup and medications were then offered to the patient prior to them resting (Gedike, 1837; Schmidt, 1831; Serain, 1777). Removing the vapours arising from the bathwater was another critical post-bath nursing intervention. Techniques used to limit the accumulation of these vapours included positioning the bath in a room adjacent to the sickroom, emptying the bathwater from the tub, placing a cover over the tub, improving the ventilation of the room by opening windows and using dry smoke (Fodéré, 1815; Schmidt, 1831).

Performing oral hygiene was another important nursing task, particularly in feverish and dehydrated patients. In the seventeenth century, a coated tongue was known to decrease taste perception, contributing to a patient's anorexia (Fernandez, 1625). The tongue was cleaned using a piece of cane and the mouth was regularly rinsed using either water, milk or a diluted vinegar solution. The use of vinegar-water solutions persisted in the eighteenth and nineteenth centuries because vinegar was believed to decrease the risk of contagion. Newer oral hygiene remedies were introduced in the nineteenth century:

> It is the duty of the nurse to pay great attention to the state of the patient's mouth … and when his tongue and gums are covered with a brown or dark crust, she must have them wiped with a bit of fine flannel, moistened, with salt and water, two or three times a day; or if this cannot be accomplished, she must put a thin slice of lemon, without the rind, in his mouth. (Johnson, 1819, pp. 173–174)

The acidity of the lemon was used to soften the coating of the tongue, allowing the nurse to scrape it off after a couple of minutes. By the 1820s, regular teeth-brushing after meals was also recommended (Hanbury, 1825). Teeth-brushing accompanied cleaning the patient's nails with a nailbrush and spraying 'eau de Cologne' on the patient's face and hands because:

> The mind is greatly assisted by these attentions; it pleases without knowing precisely the cause; the animal spirits are insensibly raised by what pleases us. I consider it very material to gratify the patient when it is not at the expense of his health. (Hanbury, 1825, p. 82)

6.5.2.2 Helping the sick to dress

The nurse was also responsible for ensuring the sick were dressed in sleep attire. In the sixteenth and seventeenth centuries, guidelines existed for the undressing and redressing of a patient. For example, all new patients were changed into a clean nightshirt upon admission. These shirts were changed upon soiling, after bathing or at scheduled intervals, such as every eight days in

summer or twice a month in winter (Anonymous, 1590). During winter, windows were shut and the fresh nightshirt was first warmed to limit the patient's exposure to the cold. Warming was a long process in which the fresh shirt and sheets were placed 'under the healthy person's sheets for one night' (Fernandez, 1625, p. 128). In circumstances in which a shirt became unexpectedly soiled, specific methods could be used to limit the patient's exposure to the cold:

> Whenever it is necessary to change clothes promptly for any reason, it will be done by three or four people taking the shirt and the sheets and rubbing them energetically between their hands until they are well warmed … this is shorter and very necessary because of the harm it may cause to dress them without such cares. (Fernandez, 1625, p. 128)

Alternatively, the nurse could put 'an arm underneath the covers without uncovering the patient' and 'gradually pull the shirt up as far as the gullet' before removing it (Fernandez, 1625, p. 129). The nurse was then expected to reverse this procedure while redressing the patient.

Similar practices continued into the eighteenth and nineteenth centuries. For example, Fodéré (1815) recommended: 'The bed linen, clothes, must always be slightly heated, and at a temperature which varies according to the season and following the heat of the sick' (p. 48). However, perspectives on limiting the exposure of a patient's body to the cold somewhat shifted, indicating the growing popularisation of miasma theory:

> The disadvantage of drying a moist, sweaty shirt on the body is much greater than that which can be caused by a slight change in the heat when changing the laundry [shirt], and the latter is avoided by proper caution. (Gedike, 1837, p. 37)

The type of sleep attire worn by the patient also gained increased attention in the eighteenth and nineteenth centuries. While there was general consensus that a nightshirt was preferable for the infirmed, new rules were introduced about other items of clothing. For example, tight nightcaps were contraindicated in cholera patients (Martin, 1832). Likewise, nightshirts that were too tight

or short were blamed for restricting chest and abdominal movement (Schmidt, 1831) and were subsequently believed to prevent adequate exhalation (Mai, 1784). Nurses were also advised to remove any of the patient's petticoats, underwear or stockings because these garments placed the person at risk of overheating (Gedike, 1837).

When necessary, the nurse was encouraged to modify the nightshirt to improve patient comfort during undressing and redressing. For example, when caring for patients with a fractured arm, the nurse was instructed to open the shirt's sleeve on the injured arm and sew ribbons on either edge so that the sleeve could be tied together (Gedike, 1837). Loose fitting nightshirts with wide sleeves were also recommended to make changing the patient an easier task (Mai, 1784). For weak or apoplectic patients, the nurse was encouraged to cut open the back of the nightshirt so that other nursing cares such as turning and washing the patient were simpler (Gedike, 1837; Greiner, 1809). In cases in which a person had limited movement in one arm, the nurse was instructed to place the shirt on the affected arm first because this method decreased discomfort (Gedike, 1837).

6.5.2.3 Managing mobility and activity levels

The benefits of exercise were well known to early nurses. Engaging in regular exercise was linked to improvements in a number of physiological processes:

> Movement … helps food distribution [digestion], and evacuations [elimination], ventilates natural heat [metabolism], moves flows [circulation], and dispels animal spirits [? increases endorphins[90]]. (Roma & Cabreyra, 1753, p. 17)

By the nineteenth century, medical terminology had been incorporated into such rationales:

[90] A question mark has been placed in front of 'increases endorphins' as I am uncertain if my interpretation is what the original author's intention was for 'dispels animal spirits'.

> Sets the muscles in stronger motion, exercises the forces [? humors[91]], accelerates the circulation of the blood, and the action of the heart; therefore it also promotes the passage of the blood through the lungs, and accelerates the breathing, as well as all other functions dependent on it … especially the secretion and exhalation. (Greiner, 1809, pp. 189–190)

Exercise was especially beneficial for certain population groups including:

- Pregnant women—'Moderate, wherever possible, daily exercise, if it may be, in the open air is particularly beneficial for pregnant women, but violent movements must be avoided altogether. Long standing, a lot of sitting, continuous occupation with handicrafts, must be avoided' (Gedike, 1837, p. 170).
- Those with intractable constipation for whom the purgative had not worked. Exercise in this case was believed 'to shake the humors' (Roma & Cabreyra, 1753, p. 18).
- Convalescents—'As soon as the state of his health permits it, allow moderate exercise … not too strenuous … appropriate to his strength' (Greiner, 1809, p. 182).

Despite such benefits, strenuous activity was limited during the acute phase of illness. Reasons for limiting the patient's activity levels ranged from basic explanations ('Movement and exercise are very harmful to those with fever' [Roma & Cabreyra, 1753, p. 18]) to more elaborate rationales:

> In illness there is already too much blood circulating, a feeling of fatigue, a daily decrease of strength, therefore all self-active movement must be avoided. The patient needs rest, the remaining strength has to be used to defeat the illness, and one must rather seek to moderate the too hasty movement of the blood. (Greiner, 1809, p. 190)

[91] A question mark has been placed in front of 'humors' as I am uncertain if my interpretation is what the original author's intention was for 'exercises the forces'.

Such beliefs resulted in the patient being confined to bedrest for long periods, with doctors determining when it would be safe for the patient to partake in activities, such as sitting out of bed or using the commode.

> They will not consent to raise those [the patients] who are good from the beds, but [wait for] when the doctors order it … because they tend to relapse with greater damage' (Congregation of Bernardino de Obregon, 1634, fol. 7)

Restricting patients' mobility resulted in early nurses engaging a number of manual handling tasks. For example, in the case of Obregonian nurses administering an enema to an unconscious patient:

> Should they order to administer some medicine to an apoplexy patient, [the nurse] will leave the said patient lying on their back in bed without moving them; [the nurse] will remove the pillows and will bend their legs upwards in such a way that their heels are close to the buttocks; another person shall raise their legs in such a way that they remain about a hand above the mattress. (Fernandez, 1625, p. 86)

It also increased the patient's likelihood of developing a pressure injury. Pressure injuries were believed to the result of 'constant pressure in one and the same place, which stimulates the veins to suck in the fat and flesh particles there' (Greiner, 1809, p. 168). Nurses were instructed to observe for potential signs of a pressure injury, such as a 'spot [that] first turns red, then sore, then [appears as] raw flesh' (Greiner, 1809, pp. 168–169) or a patient that 'complains of pains in the back and buttocks' (Fodéré, 1815, p. 52).

Preventing the development of a pressure injury in an immobilised patient was a priority nursing care, so much so it was considered a 'chief duty of the nurse to control' (Schmidt, 1831, p. 141). To decrease the likelihood of pressure injuries, the nurse was encouraged to perform regular skin checks of the patient's bony prominences and was required to ensure that:

> The patient must not always rest on one side with the weight of his body, but his position must be changed from time to time, and he must, wherever possible, hold a more lying position than a sitting position in bed, so that not all the weight of the patient's body acts on the cross [sacral area]. (Gedike, 1837, p. 123)

Once the patient had entered the recovery period, a staged approach to mobilisation was implemented:

> When a patient is beginning to recover, he should be daily placed upon the sofa, and each successive day he should remain there for a longer period than the day before. This tends to advance his progress considerably. (Hanbury, 1825, p. 62)

A staged approach to mobilisation was necessary because of the possible muscle atrophy that occurred through prolonged bedrest:

> The muscular forces have generally suffered greatly in fevers, the legs are as heavy as lead to the sick, they can hardly sustain themselves; If they want to go down a flight of stairs, their knees will collapse; they can barely lift their legs upwards. (Greiner, 1809, p. 192)

Sitting out of bed was thought to decrease the degree of muscle atrophy; therefore, it was recommended to take place as soon as possible:

> A convalescent man in bed, if it comes down to it, can probably fatten up; but this alone will hinder him from regaining his strength unless exercise strengthens and helps his feeble muscle fibres. It is therefore necessary that the convalescent should be seated as soon as possible. (Schmidt, 1831, p. 174)

Prior to mobilising the patient, the nurse needed to inspect the patient and ensure the environment was appropriate. For example, Schmidt (1831) recommended that the nurse check

that ‘the patient’s skin is not damp, and the other bed or sofa is not cooler than he has just left so that he does not become cold’ (p. 142).

As the patient’s strength progressively increased, more strenuous activities were recommended:

> convalescents must exercise as much as possible without exaggerating the same. You can initially move in your room, after, when it's not too cold, and the time and weather allow it, even outside of it. Walking, [horse] riding, and driving are generally good exercises; only they must be done with due moderation. This latter is particularly true of riding, which incidentally is one of healthiest physical exercises.[92] (Schmidt, 1831, p. 171)

Horseriding was also recommended by Greiner (1809), who felt:

> Riding is a very healing movement, it exercises the muscles without too much effort, the change of scenery is faster, and so it is also more entertaining, more uplifting for the mind, and not so tiring as walking. The mild vibration increases the internal movement of the viscera, and promotes their healing activities. (p. 193)

These benefits meant riding was viewed as particularly useful for patients with lung conditions, gastrointestinal disorders and hypochondria (Greiner, 1809). To further strengthen muscles, the convalescent could also be encouraged to perform resistance training: ‘A *light* pair of dumb-bells is good exercise; but observe moderation in every thing [sic]’ (Hanbury, 1825, p. 86).

The nurse’s role during the convalescent stage was to ensure that the patient was not overzealous in their exercise regimen. This role meant they were often the educator and gatekeeper of the regimen:

> All too strenuous efforts must be avoided, otherwise the well-being will be harmed again by exhaustion of the muscles and excessive sweat. As soon as he feels a mild tiredness, he must

[92] Driving refers to an equine-drawn vehicle: for example, a horse and buggy.

> at once stop, first rest a little, and then go on again. In cool, rainy weather, or when thunderstorms are to be expected, in humid air, sharp east or north wind, early in the morning or late in the evening, he must not go out. (Greiner, 1809, p. 193)

6.5.2.4 Elimination and continence management

'Critical evacuations', including faecal and urinary elimination, were vital in the maintaining a patient's humoral balance (Carrère, 1786, p. 35). Therefore, pre-professionalised nurses were responsible for assisting with the maintenance of the patient's normal voiding and defecation patterns by developing a therapeutic relationship with the patient and using continence aids.

Early nursing theory recognised that a person's anxiety levels may negatively affect their normal elimination pattern, leading to problems such as constipation and urinary retention. Therefore, instilling trust in the patient by creating a safe and comfortable clinical environment was identified as an essential method for mitigating the risk of such problems:

> In the case of urine and stool evacuations, the patient should not become ill because of modesty and so on … the nurse who approaches this relationship is trusting, reserved and does not bring shame on the sick. (Martin, 1832, p. 21)

Protecting the patient's modesty and educating them on the potential complications that can occur from delaying urination or defecation were other strategies the nurse could employ to promote normal elimination patterns:

> Even healthy people have died, or they have contracted arduous and incurable diseases, because they have held them back from a false modesty for too long … One must never act contrary to the laws of nature, and if at such a moment there are persons in the room in front of whom the patient is reluctant to do his/her misery, the nurse must try to remove them as soon as possible. (Schmidt, 1831, p. 44)

Various aids were used to assist the patient with toileting. Known as ‘night dishes’, the continence aids described in the corpus included chamber-pots, commodes, bedpans and urinals. For ambulant patients, a fresh chamber-pot or commode was placed by the bed at night. The night-watch nurse was instructed to assist the weak patient in ambulating and limit the patient’s exposure to the cold, while using such apparatus by ‘dressing the patient in stockings, slippers and a dressing gown’, placing a blanket across the patient and placing a woollen cover on the commode seat (Gedike, 1837, p. 117).

Bedpans and urinals were provided to patients confined to bed. To improve patient comfort, the nurse was encouraged to warm the metal bedpan prior to use by pouring hot water into it (Dieffenbach, 1832; Gedike, 1837). Covering the edge of the bedpan with a strip of leather or horsehair was also recommended to reduce the patient’s discomfort and risk of injury while seated on the pan (Fodéré, 1815; Greiner, 1809). While a number of different urinals were described in the corpus, their functionality is consistent with contemporary urinals, including availability to both sexes. Nonetheless, some aspects of their use were different because of imposed restrictions with mobilisation. Males were discouraged from sitting on the side of the bed or standing while using the urinal because such practices placed the patient at risk—‘he can catch a cold easily’ (Gedike, 1837, p. 119). Consequently, males were encouraged to void laying down (Martin, 1832) or adopt a ‘kneeling position whereby the nurse supports him properly’ (Gedike, 1837, p. 119).

When the patient was incontinent, the nurse adopted time-saving strategies to limit the amount of soiling and protect the patient’s skin integrity. For example, for male patients experiencing overflow symptoms (i.e., dribbling), a flat-based urinal was left insitu to collect the urine. Incontinence was also managed by placing additional linen under the patient’s buttocks to absorb any urine or faeces. A commonly cited way to contain the extent of soiling was to use

an old sheet folded into quarters and laid across the bed at the patient's hip level. This technique was also deemed appropriate when the patient was too weak to leave bed. However, the nurse needed to ensure that 'care must be taken to keep the sheet taut, to avoid wrinkles which may injure or at least inconvenience the patient' (Carrère, 1786, p. 55). Alternatively, placing sponges between the patient's legs (Greiner, 1809) or using several layers of individual cloths approximately two-feet wide were also recommended (Fodéré, 1815). The latter was recommended by Fodéré (1815) because the nurse could readily remove the uppermost cloth upon its soiling, thereby maintaining a dry bed. Another strategy to reduce the extent of soiling and protect the mattress was to place a length of an oiled or waxed cloth under the patient's buttocks. If an oiled cloth or mattress became soiled, they were cleaned and dried for 'forty-eight hours in the open air' (Fodéré, 1815, pp. 51–52).

6.5.3 Encouraging adequate sleep and rest

Sleep was viewed as an essential activity across the corpus to promote comfort and restore health. Several benefits of sleep were presented, ranging from simple explanations such as Mai's (1784) advice: 'Peaceful sleep is extremely enjoyable' (p. 101) to more sophisticated rationales. For example, 'In sleep the life force gathers again … the senses rest and regain fresh energy' (Greiner, 1809, p. 173). In recognition of the restorative properties of sleep, nurses were expected to prioritise patients' sleep over most other interventions:

> When [a] nurse perceives her patient inclined to sleep, let every thing [sic] give way; never mind what time it may happen, perfect quiet is necessary, but more especially at night. (Hanbury, 1825, p. 53)

Most texts also warned against waking the patient for medications:

> The patient, even it is expressly prescribed by the doctor, must not be aroused for the sake of the medications, for sleep is to him the most delicious thing that the healing nature gives him. (Greiner, 1809, p. 181)

Consequently, the nurse was required to plan their work around the patient's sleep to reduce the risk of accidently waking the patient. For example, Dieffenbach (1832) noted that stoking the fire was a low priority compared with sleep. Therefore, the nurse was advised against 'throw[ing] the wood against the wall of the oven, which gives them a sound like distant cannon thunder' (p. 35). Instead, the nurse was instructed to carefully place the firewood in the fire. In earlier books, such as *Instruccion de Enfermeros*, the nurse was encouraged to redirect the timing of some medical interventions. For example, when the doctor had ordered a sleep-inducing remedy in the middle of the day, the nurse was urged by Fernandez (1625) to 'advise him [the physician] that the patients can hardly sleep in infirmaries with open windows and doors, [and] with so many people coming in and out' (p. 11).

A critical factor to producing a conducive sleep environment was the patient's comfort level. Subsequently, nursing interventions centred on bedding because a comfortable bed was thought to promote the 'tranquillity of the sleep' (Royal Hospital of Santiago, 1804, p. 76). The provision of clean bed linen was a priority intervention because 'sleep is more likely in such a fresh and pure made bed' (Greiner, 1809, p. 166). Another nursing concern was the presence of insects (perhaps borers) in the wooden bedframes because these were 'so hostile to a man's sleep' (Greiner, 1809, p. 161). To kill the bugs, the nurse was instructed to conduct 'frequent scalding of joints and cracks [of the frame] with boiling water' (Greiner, 1809, p. 161). Warming the bed was another nursing intervention to improve comfort and induce sleep. Mechanisms to warm the bed included using blankets, placing the bed close to a fire and using

bed-warming apparatuses such as warm coals, heated bricks, jars filled with hot water and tin bed-warmers (Anonymous, 1590; Gedike, 1837). The nurse was required to frequently move the warming device around the bed to ensure the heat was evenly distributed and reduce the risk of accidental burns to the patient.

Noise reduction within the sickroom was also viewed as a vital nursing intervention by most authors. Noise reduction was achieved via various mechanisms, including limiting visitors, reducing conversation within the ward and enforcing rest periods. For example, the Royal Hospital of Santiago de Compostela's (1804) *Constituciones* indicates that visiting hours were limited to one hour in the morning and one hour in the afternoon, with the ward locked outside these times by the senior nurse to limit unnecessary disturbances to patients' rest. During such rest periods, senior nurses were required to regularly inspect the hospital's corridors and courtyards and move along any noisy bystanders. Nightingale recommended regular bedtimes in *Subsidiary Notes*, advising: 'Every patient must be in bed by 8 o'clock in winter, and 9 in summer; and no conversation must be permitted after that time' (1858, p. 35). Other nursing interventions to reduce noise within the sickroom or ward included the nurse removing their shoes while the patient was sleeping, limiting inadvertent door slamming and eliminating squeaking doors by regularly oiling hinges. In some cases, such as at the Royal Hospital of Santiago de Compostela, the nurse was permitted to remove agitated patients from the ward to a more secluded area to stop them disturbing other patients' rest (Royal Hospital of Santiago, 1804).

Nurses were also encouraged to employ relaxation techniques to help induce sleep. These relaxation techniques included playing calming music (e.g., playing the harp), giving a massage to the patient and performing a guided meditation: 'describe to the patient a simple rural area, with a gentle, uniform tone, for example, the growth of a cornfield' (Greiner, 1809, p. 180).

Some authors also recommened the introduction of white noise, such as placing a ticking clock in the sickroom (Greiner, 1809) or 'turning over the leaves of a book in regular time' (Hanbury 1825, p. 46). Other non-pharmacological measures to promote sleep included darkening the sickroom, administering topical remedies made with lavender and chamomile, keeping the patient's feet warm and placing the patient in a position that they normally adopted while sleeping (e.g., a lateral position). Careful timing of meals was also encouraged because eating a heavy meal immediately before bed or being hungry while trying to go to sleep were both believed to cause insomnia.

The use of opiates was also deemed appropriate to treat insomnia. *Instruccion de Enfermeros* (Fernandez, 1625) provides some insight into how opium-based remedies were used to induce sleep: 'It is quite customary to apply some *populeón*[93] ointment, or any other the doctor might order, on the patient's temples and nose when they cannot sleep' (p. 16). A more laissez-faire approach to opium was apparent in some nineteenth-century books:

> opium, I contend it is the *only* mode for its producing the desired effect. When opium is taken merely to allay pain, it matters then to *give* it when *wanted*; but if taken to allay *irritation*, and of course to induce sleep, it should be variably taken *one hour* before the patient settles for the night, by which means the opium begins to operate, and sleep is produced, at the moment we want it: but when given the last thing, the patient feels disappointed at not perceiving its effects. (Hanbury, 1825, p. 49)

This disappointment was associated with provoking anxiety in the patient, which then worked as an 'antidote' to sleep (Hanbury, 1825, p. 49).

[93] *Populeón* was a soothing ointment that became popular after the fifteenth century. It was made with the buds of black poplar, pork lard, red and opium poppy leaves, belladonna and other plants. *Populeón* was also used as a haemorrhoid treatment (Calvo-Munoz, 2013).

6.6 Summary

The technical aspects of pre-professionalised nursing practice were complex. Early nursing work involved fundamental interventions that restored health, prevented complications or promoted comfort. These quotidian nursing interventions were primarily guided by humoralism, miasma theory and other forms of scientific thinking espoused during the epoch. Routine interventions performed by the pre-professionalised nurse included: preparing and administering medicinal diets and remedies; assisting with or performing specialised procedures; observing, monitoring, and surveillance; maintaining a 'safe' clinical environment; providing spiritual and pastoral support; assisting with activities of daily living; and promoting adequate sleep and rest. In Chapter 7, the findings presented, and in Chapter 5, they are discussed in the context of other literature to expound current understandings about pre-professionalised nursing theory and praxis.

Chapter 7: Discussion—Reframing the Past, Resituating the Present

7.1 Introduction

Chapter 5 provided a synopsis of the sources analysed in this study, including a description of the roles and responsibilities of pre-professionalised nurses. This information was further expanded in Chapter 6 to present a conceptualisation of pre-professionalised nursing praxis. Early nursing work consisted of interventions to restore health, prevent complications and promote comfort. The pre-professionalised nurse had a broad scope of practice, consisting of complex interventions that were influenced by corresponding advances in scientific and medical knowledge. By the late eighteenth century, a narrowing of the nurse's scope of practice was noted, coinciding with the strengthening push for nurses to be subservient to their medical counterparts. This chapter explores the findings presented in Chapters 5 and 6 through a postmodernist lens. Literature about past and present nursing praxis are used to contextualise the discussion.

7.2 Revisiting Nightingale's Contributions to Nursing

Florence Nightingale is frequently cited as the founder of modern nursing (Arnone & Fitzsimons, 2015; Clements & Averill, 2006; Dossey et al., 2019; Ellis, 2019; Hegge, 2011; Karimi & Masoudi Alavi, 2015; Lee, Clark, & Thompson, 2013; MacMillan, 2012; MacQueen, 2007; Magpantay-Monroe, 2015; McDonald, 2009, 2014, 2018; Winkelstein, 2009). This reverence for Nightingale began in the 20-month period she spent serving in the Crimean War because of the improvements she made to the health and welfare of British soldiers (Selanders & Crane, 2010). As the nation's darling, Nightingale's elevation to an authority figure on nursing quickly gathered momentum, with the establishment of the Nightingale Fund in 1857

and the release of *Notes on Nursing* in 1859 (Smith, 1982). The admiration and subsequent mythology surrounding Nightingale was further amplified by the release of E. T. Cook's[94] (1913) biography following her death in 1910. In this biography, Nightingale is portrayed as single-handedly reforming nursing from a menial, disreputable vocation to that of a respectable vocation for women. Many subsequent accounts of Nightingale's life and legacy have been a recension of Cook's biography, creating a perpetuation of invalidated claims about Nightingale and the extent of her achievements (Baly, 1997; Libster & McNeil, 2009). For example, Nutting and Dock (1907b) described Nightingale's practical and technical knowledge as 'so extensive, so minute, so exact and above all so intelligent is it found to be that it is perhaps not too much to call her the foremost sanitarian of her age' (pp. 207–208). They also described *Notes on Nursing* as 'A very remarkable example of the originality of this [Nightingale's] teaching' and 'an immortal classic' (p. 208). Such early assertions promulgated the metanarrative that Nightingale 'miraculously transformed nursing almost overnight' (Helmstadter, 2002, p. 325) creating the orthodox allegory of nursing history that has been widely accepted by the profession (Wildman & Hewlson, 2009).

Table 7.1 provides a brief overview of how Nightingale's contributions to the profession are presented in contemporaneous scholarship. However, several key findings of this study raise questions about the legitimacy of claims made about Nightingale's enduring legacy. The legitimacy of these claims will be explored in context with the study's findings in Sections 7.3 and 7.4. This discussion will explain why, as a profession, it is time we repealed the Nightingale myth.

[94] Cook was commissioned by Nightingale's family to write the first biography after her death. Critics of the book question the accuracy of Cook's assertions about Nightingale because of potential bias. Cook was appointed by Henry Bonham Carter, Nightingale's first cousin, executor of her will and was the longstanding secretary of the Nightingale Fund (Baly, 1997).

Table 7.1 Sample of the Nightingale's contributions as cited in contemporary literature

Contribution	Exemplar
Establishing the first secularised training program	'In the above presentation of [Mary] Seacole, Nightingale is absent, although she qualifies eminently as a pioneer, not only for founding the first secular training program for nurses in the world in 1860' (McDonald, 2014, p. 1438).
Introducing the 'science' and 'art' of nursing	'In fact, nursing is a multi-faceted science and art with a rich history steeped in the roots established by Florence Nightingale that embodies caring for vulnerable populations at the highest level' (Jackson, Clements, Averill, & Zimbro, 2009, p. 150).
Introducing moral reform	'Florence Nightingale brought nursing from a disreputable and immoral vocation into the honest and ethical profession that is enjoyed today by emphasizing strict morals in the personal and work lives of her nursing students' (Hoyt, 2010, p. 331).
The inventor of professional knowledge	'The first scientific revolution in nursing was catalyzed by the dissemination of Nightingale's works. Her publications heralded the advent of modern nursing as a profession with its own professional knowledge about safe and sanitary environments' (Koffi & Fawcett, 2016, p. 248).
Introducing sanitation into the nursing practice	'Nightingale's writings are often credited with introducing environment health into the practice of nursing' (Wakefield, 2001, p.118).
Recognising the importance of monitoring and surveillance	'Florence Nightingale was among the first to associate monitoring with nursing care' (Giuliano, 2017, p. 35).
Introducing nurse–patient communication	'The importance of communication and interaction for nursing has been an often stated point by nurses and nursing scientists since Florence Nightingale in the 19th century and continuing until today' (Fleischer, Berg, Zimmerman, Wuste, & Behrens, 2009, p. 339).
Nurse researcher and epidemiologist	'She was the first nurse researcher and instituted the first evidence-based practices in nursing' (Strickler, 2017, p. 45).
Maintaining patient dignity	'Nurse theorists, beginning with Florence Nightingale, have focused on the importance of alleviating human suffering while treating each individual with care, respect, and reverence' (Hegge & Bunkers, 2017, p. 291).

7.3 Reframing the Past

A major outcome of this study is a new perspective on pre-reformation nursing practice. In some ways, the findings confirm and extend what is known about early nursing theory and

praxis. In other ways, the findings disrupt contemporary paradigms within the profession. Discussion on how and why the profession should reframe its understanding of the past will focus on three main topics: restoring the image—rethinking narratives about pre-professionalised nurses; reconsidering the origins of early nursing theory; and reconceptualising pre-professionalised nursing praxis.

7.3.1 Restoring the image—Rethinking narratives about pre-professionalised nurses

Current conceptualisations of pre-professionalised nursing are marred by anecdotes of ignorant, disorderly and immoral nurses. McDonald (2018), for example, described nurses who pre-dated Nightingale as:

> The women called 'nurses' before her [Nightingale's] reforms, apart from those in religious orders, were low paid, disreputable, and often drunk. They were mainly used as hospital cleaners. Their 'cardinal sin', according to Nightingale, was demanding bribes for their services. (p. 6)

Similar portrayals of the 'unreformed' nurse are found in nineteenth-century media and literature. The most prominent depiction of the pre-reformation nurse is that of Charles Dickens's fictional character, Sarah ('Sairey') Gamp. Gamp was a domiciliary nurse and midwife who appeared in the 1843–1844 serial (and later novel), *The Life and Adventures of Martin Chuzzlewit*. Gamp and her contemporary Betsy Prig, a hospital nurse, were described as slovenly, morally corrupt drunkards who placed their own interests before those under their care (Helmstadter, 2013). Within a decade of these ruthless characters being created, Gamp and Prig became opportune symbols used to highlight the inadequacies within Victorian hospitals, including substandard nursing care provision (Grehan, 2004; Rafferty,1996a; Summers, 1989), providing the catalyst for nursing's modernisation.

During this period, ‘the mismanagement and misconduct of hospital nurses’ (South, 1857, p. 18) provided the vehicle for medicine’s ascension to the top of the healthcare system hierarchy, securing its political power, social status and authority in the public sphere (Ehrenreich & English, 2010; Rafferty, 1996b; Tosh, 2007; Urban, 2014). The findings from this study indicate that most doctors who wrote the late eighteenth- and nineteenth-century texts partook in such power-grabbing strategies. The most frequent tactic present in these sources was to blame nurse incompetence for the alarming rates of morbidity and mortality. Mai (1784), for example, frequently noted his disdain for nurses’ quackery:

> It is much to be regretted that almost every nurse, when she heals a cure here and there through long association with doctors and surgeons, gradually degenerates himself into an irrepressible quack, into a medical indisposition. (p. 83)

Such rhetoric portrayed nurses of this era as dangerous and provided an effective smokescreen for poor hospital governance, the inefficacy of medical treatments and the general ineptitude of the medical profession. Promulgating such rhetoric also resulted in a discourse in which allegations made against nurses were ‘beginning to be assumed as facts’ by the public (South, 1857, p. 18). The tenacity of this discourse was the catalyst for the nineteenth-century nursing reforms because training was perceived to be a cure for incompetence (Rafferty, 1996b; Williams, 1980). Such ‘fake news’ also cemented Gamp as a powerful, yet inaccurate representation of the pre-professionalised nurse (Summers, 1989, 1997).

This rhetoric about the disreputable state of nursing that Nightingale and her lady nurses set out to rehabilitate has permeated much of the twentieth-century nursing historiography and beyond (Hawkins, 2010; Summers, 1989; Williams, 1980). These studies tended to indiscriminately accept claims made by key Nightingale biographers E.T. Cook and Cecil Woodham-Smith, including their embellishment of the extent of ‘unreformed’ nurse incompetence, to heighten

the magnitude of Nightingale's achievements and influence on the profession (Summers, 1989). In the 1980s, historians such as Summers (1989, 1997), Baly (1986,1997), Maggs (1983), Williams (1980) and Smith (1982) began to explore the Nightingale-led reforms and pre-professionalised nursing with a critical lens, considering other factors that shaped Victorian-era nursing, such as classism, social and labour reform, industrialisation, gender and the rising power and status of the medical profession. While such studies challenged the legitimacy of popular constructs about pre-reformation nursing, much of the Gamp-ist rhetoric introduced in the nineteenth century continues to be unquestionably accepted as an accurate representation of the pre-professionalised nurse praxis in the broader nursing literature and popular culture (Stanley, 2007). The findings of this study challenge much of the rhetoric that persists about the attitudes and deportment of 'unreformed' nurses as ignorant, disorderly and immoral.

7.3.1.1 Ignorant

The first narrative challenged by the study's findings is the level of ignorance purportedly displayed by pre-professionalised Gamp-esque nurses. Ignorance, defined as a lack of knowledge or education, is a common feature found in archetypes depicting the pre-professionalised nurse (Summers, 1989). The basis for this assumption likely arose from the lowly status of nursing in the early to mid-nineteenth century. Nurses of this era were often working-class women; hence, they were not given the same educational opportunities as men or those from a middle or upper-class background. Appraising these circumstances assists in understanding why literacy—or at the very least, 'a good memory'—was a desirable trait for nurses in this period (Schmidt, 1831, p. 3), However, the findings also indicate that literacy was not always an 'optional extra' trait for nurses. The Spanish sources from the sixteenth and seventeenth centuries consistently indicated that literacy was an essential trait of nursing staff. These Spanish nurses were required to be literate so they could document medical orders, refer to such orders and follow complex recipes in the hospital's receipt book. Other studies

exploring early Spanish nursing praxis have also found that literacy was an inherent requirement of the Spanish nurse (Calvo-Calvo, 1997; Garcia Martinez, Garcia Martinez, & Valle Racero, 2013).

Pre-professionalised nurses' ignorance was also believed to be caused by a lack of understanding about healthcare principles, resulting from inadequate training and resources (Libster & McNeil, 2009; Nelson & Gordon, 2004; Nightingale, 1858). However, the volume of texts describing nursing praxis analysed in this study, along with the depth of content contained within them, counters this assumption. The collective purpose of these books was to be a resource for nurses so they could learn and upskill themselves, intimating not only that pre-professionalised nurses had a theoretical knowledge base about their vocation, but also that there was a desire, at least by some nurses, to increase their practice standard. This sentiment is also validated by other (non-digitised) sources from this epoch. For example, in another Spanish nursing treatise, *Directorio de Enfermeros* (*Directory for Nurses*), author Simon Lopez, a nurse and barber, highlighted the importance of nurses continually improving their knowledge base:

> Besides this, it is necessary to advise, note and read a lot (to become skilful) of the information and many ways of executing the many remedies and advice that are referred to in this book. (1651, as cited in Garcia Martinez et al., 2013, p. 44)

A perceived lack of training in pre-Nightingale nurses is also contested by the study's findings. This assumption is particularly challenged by the multiple hospital and religious orders' regulations examined in this study. Despite being separated by vast distances, similarities persisted in how novices were socialised into their vocation. The sources provided evidence that novice nurses received lessons on theology, ethics and the machinations of the organisation. Practical knowledge and skills were learnt by reading hospital receipt books and nursing

treatises, role modelling by more senior staff and experiential learning. For example, the regulations of the Obregonian Congregation (1634, fol. 8) provided insight into the operationalisation of this training model in which instruction on 'how to cleanse, cure and support the sick poor' was the remit of senior staff:

> And the Senior Brothers, Senior Nurses they will teach this to the Brothers personally with works, accompanying them in the work of this occupation, particularly the Master of Novices, teaching them, and instructing them on things about the service to God and proper of our vocation. (Congregation of Bernardino de Obregon, 1634, fol. 8–9)

The result of this training was the creation of a disciplined, knowledgeable and organised nursing workforce during the *Siglo de Oro* (golden age) of Spanish nursing (Calvo-Calvo, 2016; Garcia Martinez et al., 2013; Sanchez-Cascado & Mingo, 2017). Thus, these nurses were anything but ignorant.

Variations of this hybrid model of theoretical instruction and practical experience are also evident in other historiographies on other early Catholic organisations in France (Nelson, 2001), Ireland (Meehan, 2012a, 2012b) and the US (Coburn & Smith, 1999; Libster & McNeil, 2009; Wall, 2012). The result of these quasi-formalised training models was the production of sisterhoods who were either acclaimed or vilified for their nursing skills. For example, a dichotomy about the Daughters of Charity existed on the eve of the French Revolution. While commonly portrayed as 'ministering angels at the bedside', the medical profession also launched an opposing campaign in which the sisters were labelled 'charlatans', lay midwives, quacks and cranks (Jones, 1989, p. 347). The latter occurred because these nuns were viewed as direct competition to their medical counterparts (Jones, 1989). Perceptions of this shift from competent to incompetent nursing care were found in most of the late eighteenth- and early nineteenth-century sources authored by doctors in this study, suggesting this phenomenon of

doctors feeling threatened by nurse competition was not just a French problem, but a universal one.

The findings of this study also provide evidence of other secularised nursing training schools being established prior to the creation of the Nightingale Fund School for Hospital Nurses at St Thomas' Hospital in July 1860. Dedicated training schools in Mannheim, Vienna and Berlin were described in a number of German sources (Dieffenbach, 1832; Gedike, 1837; Mai, 1784; Schmidt, 1831). South (1857) listed two English training schools based in London that pre-dated the Nightingale School: The Institute for Nursing Sisters, founded in 1840 by Elizabeth Fry, and The Training Institution for Nurses, established in 1848. The various descriptions of the models used for training bore similarities to the quasi-formalised training offered by the Catholic orders in that novices had a probationary period, lived on-site and received theoretical and practical instruction including moral education. Comparing these features with that of the Nightingale model provides evidence that the systematic training of novice nurses was happening prior to Nightingale receiving her own nursing 'training' in the early 1850s.

Another possible reason that nurses of this later period were viewed as ignorant was the way they informed their nursing care. The findings suggest that ignorance in the late eighteenth and early nineteenth centuries was correlated with nurses engaging in non-scientific activities. Such activities were portrayed in these sources (that were primarily authored by doctors) as 'superstitious' and biased by 'low prejudices', giving leverage to the narrative that nurses were inherently dangerous (Waddy, 1846, p. 5). However, the analysis of how nurses planned and implemented their care in this period suggests they were not superstitious; rather, they were engaged in phronesis.

Phronesis, also known as practical wisdom, is the Aristotelian virtue that 'enables a person to know when to do the right thing to the right person at the right time and the right reason'

(Sellman, 2009, p. 85). Phronesis, therefore, is not simply knowing the patient's medical diagnosis or technical skill—that is, what ought to be observed and what ought to be done. Instead, it is about knowing the person and determining how to act, not because of a directive or formula, but because the cues gathered indicate it is needed in that moment (Flaming, 2001; Sellman, 2009). The findings indicate that early nurses, such as the Obregonians, were actively encouraged to engage in phronesis to overcome chronic institutional strains such as limited or absent medical staff. The way more experienced nurses shared their knowledge and role-modelled behaviours to novices is also suggestive that phronesis was a desired output of the novices' clinical maturity (Baldwin, Bentley, Langtree, & Mills, 2014).

Therefore, the findings intimate that pre-Nightingale nurses recognised that good nursing care was much more than just good technique. They likely ascertained that the delivery of good nursing care was reliant on the nurse's phronetic skills, such as drawing on qualitative data about the patient (e.g., the ability to 'read' others' emotions by observing their non-verbal cues) and the use of 'perceptual acuity', in which data are compared with previous knowledge gained through similar experiences (Benner, 2000, p. 12). While the development of phronetic skills was actively encouraged in these earlier nurses, such perceptiveness would have been incongruent with the scientific rationality that dominated nineteenth-century medical knowledge. Hence, this resultant antimony between tacit and scientific knowledge possibly explains why an emergence of Gamp-ist nurses, who were influenced by 'ignorant superstition', suddenly permeated the literature of this period (Waddy, 1846, p. 5).

Nurses' ability to develop phronesis during the nineteenth century was likely hamstrung by the deskilling of higher-order thinking skills that occurred because of nursing's increasing subservience to medicine. Nurses of this period were no longer encouraged to think or act independently; instead, their role was subordinated to one of physician's handmaiden:

> Training is to enable the nurse to see what she sees—facts, and to do what she is told; to obey orders, not only by rule of thumb, but by having a rule of thought or observation to guide her. (Nightingale, 1894, p. 236)

Handmaiden-ism corresponded with the authority demanded by doctors of this era. Doctors wanted docile and dependent nurses who would not question orders (Maggs, 1983) and obey medical orders above all else, even if this was deleterious to the patient (Dieffenbach, 1832; Fodéré, 1815; Gedike, 1837; Greiner, 1809; Hanbury, 1825; Johnson, 1819; Mai, 1784; Schmidt, 1831; Serain, 1777). Therefore, innovative skills that were the antithesis of handmaiden-ism, such as critical thinking and problem-solving, that were encouraged in previous generations of nurses (such as sixteenth- and seventeenth-century Spanish nurses) were actively discouraged in nineteenth-century nurses. Thus, the findings of this study concur that handmaidens were a largely product of late eighteenth- and early nineteenth-century paternalism (Bridges, 1990; Hallam, 1998; Hoeve, Jansen, & Roodbol, 2014). Moreover, the findings support the belief that the judgements made about the skill of a nurse during this era had more to do with the nurse's disposition and relationship with the doctor—their virtue and etiquette—than with their experience level, knowledge or technical proficiency (Gordon & Nelson, 2006; Perry, 1906).

7.3.1.2 Disorderly

The second narrative disrupted by the findings of the study is the belief that pre-professionalised nurses were 'wholly undisciplined' (Cook, 1913, p. 188). Instead, the findings of this study proffer a paradoxical view of this narrative—hospital nurses, particularly during the sixteenth and seventeenth centuries, were highly disciplined and systematic in their processes. Discipline was required to complete the myriad of tasks performed during routine care. Consequently, these nurses were taught from the outset how to effectively time manage and prioritise tasks, such as the administration of medicinal and dietary remedies. Most hospitals also had a clearly

stated schedule for the timing of meals, medications, prayer, laundering of linen, ventilating of rooms and performing other cleaning tasks such as sweeping floors. Senior nurses supervised more junior staff to ensure these tasks were performed to an acceptable level and, when necessary, would reprimand underperforming staff. Thus, an intraprofessional hierarchy existed within these early Spanish hospitals under which nurses were managed and disciplined by more experienced nurses. Such hierarchical structures were not unique to Spain. They were also replicated in other religious nursing communities, including the Daughters of Charity in antebellum America (Libster & McNeil, 2009). Some of the ideals shared by Nightingale (1858) about ward management and reporting line structures closely resemble these earlier organisations: 'Every ward, or set of wards, should be under a head-nurse. Discipline is always defective under other arrangements' (p. 14).

Discipline was also exhibited by these early nurses through their self-restraint and dedication to God's work. As part of their service to God, nurses were expected to uphold their vows of poverty, chastity, obedience and free hospitality. They were also expected to be able to self-regulate their emotions by acting humbly and showing 'love' to their patients, even during challenging situations such as managing the delirious or frenetic patient. Further, most hospital regulations had standing orders replete with examples of temperance, such as nurses being unable to leave the hospital grounds without express permission from their superiors, undertaking regular night-watching on top of their normal role and refraining from lying, stealing and adultery. These study findings corroborate previous studies on the professional behaviours exhibited by early modern Spanish nurses in Seville (Calvo-Calvo, 1997, 2016) and Madrid (Garcia Martinez, 2004; Garcia Martinez & Garcia Martinez, 2012). Such findings are also comparable to many of the premises found within Nightingale's (1894) ideation for nursing:

> A lady who has, perhaps, more experience in training than anyone else, says: 'It is education, instruction, training—that goes to the full development of our faculties, moral, physical, and spiritual, not only for this life, but looking on this life as the training-ground for future and higher life. Then discipline embraces order, method, and, as we gain some knowledge of the laws of nature ('God's laws') … and we learn to have patience with our circumstances and ourselves; and so, as we go on learning, we become more disciplined, more content to work where we are placed, more anxious to fill our appointed work than to see the result thereof; and so God, no doubt, gives us the required patience and steadfastness to continue in our "blessed drudgery," which is the discipline He sees best for most of us'. (p. 237)

Nightingale's ideals about what discipline was and was not were likely influenced by the time she spent with the Protestant deaconesses in Kaiserswerth and Sisters of Charity in Paris prior to the Crimean War (Wall, 2012). These formative experiences shaped her vision for nursing with regard to discipline, self-sacrifice and obedience (Libster & McNeil, 2009). Consequently, Nightingale's ideals about the necessity of discipline within nursing were most probably informed by the central tenets of religious nursing.

7.3.1.3 Immoral

The third narrative about pre-professionalised nurses contested by the study's findings is the notion that pre-professionalised nurses were immoral beings who were dangerous if left unsupervised. This narrative was arguably the most damaging to early nurses' reputations and was a common feature found in the nineteenth-century sources. Exemplars of nurse immorality, such as engaging in drunkenness, bribery, theft and infidelity, were peppered throughout these sources to scare the public about the dangers of employing an autonomous nurse: for example: 'The maintenance of the sick is the easiest opportunities for thefts' (Schmidt, 1831, p. 3). These sources also frequently described acts of deliberate deception by nurses leading to poorer patient outcomes as the result of misdiagnosis and doctors ordering misguided treatment

regimens (Gedike, 1837; Mai, 1784). Such examples created a schism between the untrustworthy nurse and trustworthy physician, helping elevate the medical profession as the self-appointed head of health care. In turn, this generated discourse of mistrust for nurses helped to further promote subservience because it validated to the public why nurses and their scope of practice must be supervised and judged by the medical profession.

Pro-nursing reformers also used this discourse as a catalyst for reformation (Abel-Smith, 1960). Such narratives were evident in Nightingale's writing, even prior to the Crimean War. For example, in an 1851 letter to her cousin Henry Bonham Carter, Nightingale (as cited in Cook, 1913) described the nurses working at a London hospital:

> they are all drunkards, without exception, Sisters and all, and that there are but two nurses whom the surgeon can trust to give the patients their medicines, I thought you would be pleased to hear how bad they are, so I tell you. (p. 117)

More forceful hyperbole was used in the years immediately before the establishment of the Nightingale School at St. Thomas Hospital. Unreformed nurses were described as:

> sly, dishonest, and thoroughly venal; she extorts gifts and takes bribes from her patients and their friends—and the friends of hospital patients, like others, are of various kinds; she commits constant acts of petty but often most dangerous dishonesty, possibly remaining an efficient and clever nurse, sometimes a favourite nurse; and, so far as regards the crime which has taken the name of immorality, a moral woman. (Nightingale, 1858, p. 11)

While this discourse of mistrust was omnipresent in the late eighteenth- and nineteenth-century sources, the findings indicate this dialogue was less apparent in earlier sources. Instead, the sixteenth- and seventeenth-century sources described nurses who were trusted to use their clinical judgement to modify treatments according to the patient's condition, supervise other

members of the healthcare team (e.g., barbers and apothecaries) and expand their scope in the absence of doctors. Hence, a discourse of trust existed in these earlier sources.

Several interrelated factors likely led to the discourse of mistrust in the late eighteenth century, giving rise to the Sarah Gamp archetype of the pre-professionalised nurse. First, perceptions of mistrust were likely influenced by classism. Classism allowed the normalisation of judgements by those of a higher class, such as the medical profession and later Nightingale's lady nurses, to decide whether a nurse or prospective trainee nurse was inherently moral or immoral. Coinciding with this normalisation of judgement was the belief that people who were impoverished or from the working classes—including unreformed nurses—were normally immoral: 'The present class of nurses, with few exceptions, do not present those qualifications, which the very responsible trust imposed upon them, renders necessary' (Sieveking, 1846, p. 5). Second, the increasing secularisation of nursing may also have contributed to this narrative because it changed how nursing care was perceived by the public. The shift from a charitable service to a paid vocation changed how nursing was judged. For example, Waddy (1846) asserted secularised pre-professionalised nurses needed to be respectable because they were being 'well paid' for their services:

> It is almost superfluous to say that a nurse should be honest, not only in reference to the property of her employer, but, also, as regards the performance of the duties, for the discharge of which she is generally well paid. (p. 12)

Mistrust was also likely fostered because of the educational and status divide between nurses and medical officers. By the nineteenth century, the medical profession's status as experts in health was firmly established by the introduction of licensing, the formalisation of tertiary educational standards and the founding of authoritative bodies such as the Royal College of Surgeons and the American Medical Association (Ehrenreich & English, 2010; Libster &

McNeil, 2009; Rafferty, 1996b; Stephens-Borg, 2010). Such mechanisms provided the vehicle for medicine's ascension to the top of the healthcare system hierarchy, securing its political power, social status and authority in the public sphere (Ehrenreich & English, 2010; Rafferty, 1996b; Tosh, 2007; Urban, 2014). Along with these structural reforms, doctors expanded their medical knowledge through advances in science (Helmstadter, 2002) and the progressive medicalisation of normal bodily functions (e.g., menstruation and childbirth) and societal problems (e.g., homosexuality and addiction; Misbach & Stam, 2006). With their newly found expert status, doctors were able to influence societal views on other less 'enlightened' practitioners, including nurses (D'Antonio, 2007; Ehrenreich & English, 2010; Jones, 1989). By medicine questioning the morals and competence of pre-professionalised nurses, the public also began to mistrust their skills and conduct. This generation of mistrust permitted the medical profession to influence, if not assume control, on the reformed training of nurses and their and scope of practice. This strategic manoeuvre effectively secured nursing's subservience to medicine.

The findings from this study indicate that Gamp-like nurses were a creation of the late eighteenth and early nineteenth centuries and were not evident in the pre-professionalisation texts. Rather, these nurses were products of the societal norms of the period. Public drunkenness was tolerated by hospital authorities and nurses often received alcohol as a system of payment (Abel-Smith, 1960). Even Nightingale (1858) endorsed alcohol consumption while on duty:

> I would allow each Nurse 11/2 pint of porter or ale *per diem*, or, instead of the half-pint of porter, 1 oz. of brandy or a wineglass-full of wine, as she likes best. Most Nurses crave, and rightly, for a luncheon about 9 or 10 A.M., and drink some beer then. I would let them take their own time as to when they drink their day's allowance. But, while trying to suit each Nurse's varying tastes (and in Hospital duty the taste does vary) each Nurse must keep to one thing, say for a week or month. (p. 20)

The poor hygiene habits displayed by these nurses may have been a result of inadequate sanitation facilities provided to staff (Abel-Smith, 1960). For example, the equipment used for staff ablutions at the Royal Infirmary, Glasgow, in 1868 was limited: 'One or possibly two jugs and basins and a few towels were considered sufficient for the ablutions of the staff, and nothing more potent that soap and water, possibly tinted with a dash of Condy's fluid' (Godlee, 1917, p. 128, cited in Haldane, 1923, p. 96). Further, educated women were less likely to enter the profession because of the poor remuneration, despite harsh working conditions, leaving vacancies to be filled by women with little other vocational options (Abel-Smith, 1960). Therefore, the production of Gamp-like nurses was also a sign of societal opportunities in the early nineteenth century.

Therefore, the findings of this study concur with Abel-Smith's (1960, p. 5) analysis of the state of pre-professionalised nursing in the nineteenth century: 'It is not unusual for reformers to overstate the evils they are hoping to correct. It was, however, certainly unfair to condemn all the untrained nurses' (p. 5) Instead, the profession needs to acknowledge that narratives on the conduct of pre-professionalised nursing, such as those that promoted images of ignorance, disorder and immorality, were exaggerated representations of nursing in this period, used to subjugate nursing to the medical profession. This study's findings, therefore, assist to restore the image of the pre-professionalised nurse by presenting a chronological and more inclusive portrayal of early nurses and the nature of their nursing work.

7.3.2 Reconsidering the origins of early nursing theory

Nightingale is renowned for her prolific writing in which shared her views on the state of health care and nursing in the mid- to late nineteenth centuries (Jackson et al., 2009; Morley & Jackson, 2017). By sharing her practical knowledge and observations from the Crimean War, most prominently through advice books such as *Notes on Nursing* and *Notes on Hospitals*, arose

the popular assumption that nursing prior to Nightingale was 'little more than the administration of medicines and the application of poultices' (Nightingale, 1859, p. 6). Through such publications, Nightingale detailed key theoretical concepts, such as the need to meticulously observe the patient and create a conducive sickroom environment to assist in 'Nature's reparative processes' of the body (p. 6). The description of these foundational nursing principles informed nursing praxis in the late nineteenth and early twentieth centuries; some argue that they continue to be 'influential in shaping the field of nursing as we know it today' (Newland, 2019, p. 8). Consequently, such contributions to nursing theory and praxis have led to Nightingale being considered the 'theoretical figurehead' of contemporary nursing (Warelow, 2013, p. 40). However, comparing the findings of this study with accolades commonly attributed to Nightingale raises questions about the originality of her ideas and thoughts as they relate to nursing theory.

The most influential nursing theory linked to Nightingale is her descriptions of sickroom management. Known as the 'art of nursing', Nightingale provided prescriptive instructions for improving the patient's immediate environment, so it was conducive to healing. This healing environment was achieved by the nurse implementing basic hygiene and sanitation standards, such as improving the air quality within the sickroom by regularly refreshing the air, ensuring adequate lighting and heating within the room, reducing noise levels, keeping the sickroom clean and tidy, and keeping the patient's body free from dirt and excrement (Nelson & Rafferty, 2010; Selanders, 2010). These basic principles were perceived as 'new and revolutionary' (Cook, 1913, p. 419)—a belief that persists in some contemporary nursing literature (Koffi & Fawcett, 2016; McDonald, 2018; Zborowsky, 2014).

However, the findings presented in Section 6.5.2 provide evidence that many of Nightingale's key principles were not nascent thinking. The study's findings indicate that as early as the

sixteenth century, nurses were engaged in daily tasks explicitly designed to reduce the risk of cross-contamination and miasma load within the clinical environment. These routine tasks included washing patients, cleaning the floor several times a day, promptly removing rotting organic matter and excrement, cleaning soiled equipment and linen and refreshing the air using incense, fumigations and/or opening the windows. Such discussions were most elaborate in the nineteenth-century sources analysed in this study, with large proportions of each source dedicated to describing the science of sickroom management and miasma theory. Much of the advice offered in these books was consistent between sources and comparable to other recommendations in other non-digitised nursing treatises of the period. For example, in Sister Matilda Coskery's *Advices Concerning the Sick*, she noted:

> Of the Cleanliness in the Sick Room
>
> Pure air is so necessary for the sick room, that every means must be used to preserve it.
>
> On the nurse, this duty almost entirely depends. Every thing [sic] disgusting smell or sight must be removed as soon as possible—The evacuations removed immediately form the room; the body, & the bed clothes shd [should] be as frequently changes as circumstances will allow. Fresh air shd be admitted as freely as the condition of the sick will allow of; no filth to remain on the floor, tables, bed, hearth, &c. (Coskery, c. 1840, p. 52, as cited in Libster & McNeil, 2009, p. 379)

Similar recommendations were also identified in popular health advice books of the period, such as *Miss Beecher's Domestic Receipt Book* (Beecher, 1846) and Child's (1837) *The Family Nurse.* For example, Child (1837) recommended:

> Keep the chamber well aired. Fevers are often prolonged by an unreasonable timidity about fresh air. The only precaution that is necessary is to keep your patient out of the current of it, and away from damp walls. Garments and bed-clothes should be changed more frequently in

> sickness than in health, and always carefully aired. If the patient is too ill to have her clothes changed every night and morning, they should be washed the oftener. (p. 8)

Much of Nightingale's advice on how to provide comfort for patients also contains comparable recommendations to those found in Section 6.6.3. For example, her recommendations for promoting sleep and rest in *Notes on Nursing* contain basic advice on how to create a conducive sleep environment by limiting noise and ensuring the room is adequately ventilated and warmed. However, more advanced sleep hygiene practices found in earlier sources, such as the nurse using a ticking clock to produce white noise or using guided imagery to induce relaxation, were absent from *Notes on Nursing*. Nightingale also failed to accompany her advice on rest and sleep with any scientifically based rationales that outlined the restorative functions of sleep, yet these were found in earlier nineteenth-century books such as Greiner (1809).

The findings presented within the subthemes maintaining a 'safe' environment and encouraging adequate sleep and rest, along with the popular health advice books of the nineteenth century, demonstrate that many of the suggestions proposed by Nightingale in works such as *Notes on Nursing* were not novel. Rather, they were common health practices of the period. Therefore, there is a need for the profession to recognise that many early nursing theories did not originate with Nightingale. Instead, they were generated through knowledge sharing between generations over centuries.

7.3.3 Reconceptualising pre-professionalised nursing praxis

The fundamentals of pre-professionalised nursing care were described as 'a thousand nameless acts of kindness and attention' (Waddy, 1846, p. 6). These nursing acts focused on measures to restore health, prevent complications and promote comfort. They included the core elements of preparing and administering therapeutic agents (e.g., medicaments and diet), assisting and/or performing specialised procedures (e.g., bloodletting, leeching), assessing and observing the

patient, maintaining a safe environment (e.g., basic infection prevention and control measures), easing spiritual and emotional distress through the provision of pastoral care, assisting with activities of daily living and ensuring adequate sleep and rest.

Therefore, pre-professionalised nurses recognised that the patient's recovery from ill health was reliant not only on the administration of medicinal therapies, but also on the nurses' ability to produce a conducive environment for healing and maintain or improve the emotional and spiritual wellbeing of the patient. The findings from this study confirm that the fundamentals of pre-professionalised nursing care were much more complex than Nightingale (1859) claimed: 'It has been limited to signify little more than the administration of medicines and the application of poultices' (p. 6). Further, when examining what Nightingale's (1859) perspectives on the ideal components of nursing—'It ought to signify the proper use of fresh air, light, warmth, cleanliness, quiet, and the proper selection of diet—all at the least expense of vital power to the patient' (p. 6)—her views were consistent but less sophisticated than earlier constructs of nursing praxis, such as the Obregonians' scope of praxis.

These early modern nurses frequently used scientific knowledge to guide their nursing care. For example, the seventeenth-century pre-professionalised nurse was expected to use anatomical landmarking techniques to discern the correct location for poultice placement and to execute precision when measuring and preparing herbal and elemental remedies. Similarly, the eighteenth-century nurse was expected to understand physiology and pathophysiology to assess the patient and determine possible causes for clinical manifestations exhibited by the patient. Thus, pre-professionalised nurses in the early modern period were expected to be familiar with the humoralism and miasmic theories. Such scientific paradigms informed many of their routine nursing cares, including the administration of medicinal and dietary remedies, assisting or performing clinical procedures (such as bloodletting or blistering), and maintaining

the clinical environment. Consequently, these nurses' praxis was considerably broader and more complex than those typically depicted in narratives about pre-professionalised nursing praxis.

Existing narratives about the scope of pre-professionalised nursing practice depict the nurse's role as consumed by menial domestic duties, rather than engagement in the contemporary ideals of nursing work. As a consequence, pre-professionalised nursing praxis is commonly perceived to consist of a series of uncoordinated, non-scientific chores that mirror the principles described in popular nineteenth-century household-advice books, such as *Notes on Nursing* and *Miss Beecher's Domestic Receipt Book* (Beecher, 1846), as opposed to being complex, evidence-based nursing interventions (Libster & McNeil, 2009; Libster, 2018).

The disconnect between popular conceptualisations about early nursing praxis and the study's findings may be a result of metanarratives that arose during the early twentieth century. Seminal nursing historiographies, such as Nutting and Dock's (1907a) *A History of Nursing*, have arguably trivialised the contribution and skillset of our pre-professionalised forbearers. For example, Nutting and Dock (1907b) provided only simplistic descriptions of the work undertaken by pre-professionalised nurses:

> With basin and towel in hand the Sisters [Augustinian Sisters practicing at the medieval Hôtel-Dieu in Paris] went from one man to another, washing faces and hands, giving drinks, comforting and assisting generally. Then the beds were made …. Meals were served at 11 A.M. and 6 P.M. (p. 300)

In this description, there is no additional explanation about the purpose of these cares, nor is there any mention of other key nursing tasks likely performed by such sisters, as evidenced in the findings of this study (e.g., preparing and administering medicinal and dietary remedies, assessing, assisting with surgeries and implementing basic infection control measures). Hence,

while Nutting and Dock's (1907b) descriptions provide crude glimpses into the daily routine of early modern nursing, such explanations oversimplified the working conditions, knowledge, skills and attributes required to coordinate and implement nursing care during this period.

This oversimplification of pre-professionalised nursing praxis is most visible in Nutting and Dock's failure to provide a thorough insight into the foundational nursing tasks of medication administration and patient monitoring. While the findings of this study suggest the preparation and administration of medicinal remedies was 'one of the nurse's most important tasks' (Gedike, 1837, p. 46) performed by a pre-professionalised nurse, only vague descriptions of the administration of medications are found in this book, such as 'give them their medicines' (Nutting & Dock, 1907b, p. 319), 'giving medicines and foods' (Nutting & Dock, 1907b, p. 280) or 'That they [nurses] give medicines as directed' (Nutting & Dock, 1907b, p. 466). Similarly, there is minimal mention of the nurse's role in patient observation and monitoring in the historiography except for chapters pertaining to Nightingale's achievements in Volume 2: Chapter 4—'The Nightingale School for Nurses at St Thomas Hospital' and Chapter 5—'Miss Nightingale's Writings'. While it was not necessarily Nutting and Dock's intent to provide their audience with the minutiae of performing such essential nursing tasks, their omission of the complex nature of preparing and administering medicinal remedies and failure to highlight the full spectrum of pre-Nightingale nursing assessments, subliminally reinforced the handmaiden image that continues to influence the metanarratives about early nursing praxis.

7.4 Resituating the Present

The second major outcome of this study is the discovery that many theories and practices in contemporary nursing have been influenced by the ideologies of pre-professionalised nurses. These ideologies were apparent in the sixteenth-, seventeenth- and eighteenth-century sources, indicating that Nightingale and her reformers were not solely responsible for shaping the

profession as we know it. Rather, transgenerational sharing of nursing knowledge (via oral and written means) and praxis likely occurred within these early nursing communities. This study confirms that nursing is a profession that is not only steeped in history, but that pre-dates Nightingale. The discussion in this section focuses on areas of nursing praxis in which there are notable persistences in theory or practice.

7.4.1 Persistence in theory

The findings of the study indicate that the way pre-professionalised nurses used theory to inform their practice are comparable to some tools used to teach today's novices how to integrate theory and practice. Pre-professionalised nurses were expected to use higher-order skills, such as critical thinking and judgement, to plan, implement and evaluate their nursing care. The development of such skills was likely influenced by the way neophyte nurses learnt their craft from their more experienced counterparts, including through instructional guides. Many sources analysed in this study had a logical and systematic method for presenting information to the reader, whereby interventions were presented in a step-by-step approach that was underpinned by supporting experiential or scientifically based rationales. For example, the 'who, what, when, where, how, why, what if?' model discussed in Chapter 2 was used by Fernandez in *Instruccion de Enfermeros* to describe the planning and implementation of key nursing interventions that formed the quotidian nursing work of the Obregonian Congregation. Fernandez's model is comparable to some of the elements of the twentieth-century nursing process and the twentieth-century clinical reasoning cycle, in that he expected his nurses to be able to discern clinical cues, identify problems, prioritise nursing cares and implement an individualised plan of care according to the patient's situation.

These findings also indicate that nursing was considered both a science and art prior to Nightingale. The terms 'art of nursing' and 'science of nursing' were present in multiple sources

analysed in this study (Anonymous, 1836a; Hanbury, 1825; Longshore, 1842; Martin; 1832; Schmidt, 1831; Serain, 1777). The art of historical nursing referred to pre-professionalised nurses' soft skills, such as knowing and understanding the patient, recognising their care needs and performing caring acts (e.g., presencing) to show empathy to those under their care. Like today, the art of archaic nursing was the 'essence of nursing and the way of being and knowing' that led to the development of therapeutic nurse–patient relationships (Henry, 2018, p. 53). In contrast, the science of archaic nursing focused on technical and procedural aspects of care. It encompassed the evidence that governed practice, the mechanistic techniques of performing care, the level of competence to which it should be performed and by whom. The findings also indicate that pre-professionalised nurses, particularly in the seventeenth and eighteenth centuries when procedural tasks were at their most scientific and complex, were expected to find a balance between the science and art of nursing. These early modern nurses needed to be competent and efficient in performing a wide array of technical skills yet were concomitantly required to demonstrate compassion towards their patients.

Finding this balance between the art and science of nursing is a problem that persists in contemporary nursing praxis. This difficulty may be partially because of the undervaluing of the art of nursing in contemporary healthcare systems in which the hospital essentially operates as a business and is concerned with measurable outputs, such as reducing costs, average length of stay and reducing elective surgery waitlists. Thus, the contemporary nurse's ability to engage in the art of nursing may be compromised by economic rationalisation such as reduced staffing and resources. Another factor that may be affecting the balance between the art and science is the aesthetic nature of these nursing interventions. Engaging in artful nursing practice results in less visible outputs that are not readily detected by others outside the nurse–patient therapeutic relationship, nor is effectiveness of these interventions easily quantified (Palos, 2014). This relative covertness means that these aspects of care, such as providing patient

education or emotional support, are persistently left undone or omitted from patient care because they are under-prioritised (Kalisch, 2006).

These factors are not necessarily the primary cause of why nurses find this balancing act between the art and science of nursing difficult. They do, however, highlight a problem that has more broadly affected nursing prior to and following professionalisation: permitting others outside the profession to judge what constitutes effective nursing care. While this judgement has been the norm immemorial, it reached its peak during the nineteenth and early twentieth centuries, coinciding with the handmaiden status endorsed by Nightingale. However, even with professionalisation, nursing has struggled to become fully autonomous because of its historical social positioning with medicine (Gleddie, Stahlke, & Paul, 2018; Price, Doucet, & Hall, 2014; Sabatino et al., 2014; Stievano, Bellass, Rocco, Olsen, Sabatino, & Johnson, 2018) Consequently, medicine continues to influence modern constructs of nursing because it is acknowledged by government statutes and the public as the major authority, and the principal decision-makers, of health care (Darbyshire & Thompson, 2018; Harvey et al., 2018; Hoeve et al., 2014; Williams, Perillo, & Brown, 2015). An example of this proclivity is the 2019 review on nursing education in Australia—*Educating the Nurse of the Future*—which despite its topic, was led by a non-nurse (Schwartz, 2019).

7.4.2 Persistence in practice

Findings from this study also indicate that the presence of persistences in how nurses perceive and conduct nursing work. The most notable persistence in practice are the past and current constructs of the fundamentals of nursing care. The fundamentals of nursing care are 'care activities that are required for every person, regardless of their clinical condition or healthcare setting', such as assisting with hygiene cares or mobilisation (Kitson, 2016, p. 10).

In pre-professionalised nursing practice, fundamentals of nursing care were aimed at restoring health, preventing complications and promoting comfort (see Table 7.2). These fundamentals of care formed the nurse's quotidian roles and actions to improve or maintain the patient's physical and psychosocial health.

Table 7.2: Fundamentals of nursing care—sixteenth to mid-nineteenth centuries

Domain	Nursing actions
Restoring health	Preparing and administering therapeutics Medicinal diets Medicinal remedies Indications Preparation Administration Specialised clinical procedures Bloodletting Leeching Vesicatories Other procedures
Preventing complications	Assessment and observation Monitoring and reporting Surveillance Maintaining a 'safe' environment Improving air quality Maintenance of a clean clinical environment Limiting exposure
Promoting comfort	Easing spiritual and emotional distress through the provision of pastoral support Preserving the patient's dignity through assisting with activities of daily living Assisting with personal hygiene and grooming Helping the sick to dress Overseeing mobility and activity Elimination and continence management Encouraging adequate sleep and rest

The fundamentals of pre-professionalised nursing care identified in this study closely resemble other historical descriptions in the literature. Table 7.3 provides a synopsis of Garcia Martinez et al.'s (2013) analysis of the breadth of nursing care described in Lopez's nursing treatise *Directorio de Enfermeros* (1651).

Table 7.3: Synopsis of Garcia Martinez et al.'s (2013) analysis of *Directorio de Enfermeros*

Element	Example nursing actions
Feeding	Assisting the patient to eat and drink Implementing medicinal diets
Oxygenation	Administering remedies and therapeutic methods to improve breathing
Elimination	Administering purgatives, dietary remedies or suppositories to facilitate elimination
Temperature regulation	Inducing and monitoring for diaphoresis Measures to maintain warmth or implement cooling
Maintenance of circulation/haemodynamics	Taking the patient's pulse and determining pulse state Managing haemorrhage Monitoring and managing acute deterioration
Hygiene	Bathing techniques Assisting with mouth cares Assisting with the patient to dress Bed-making Keeping the clinical environment clean Keeping the room ventilated
Rest and sleep activity	Administering sleep-inducing remedies Monitoring sleep patterns including coma
Physical safety/physical exercise	Patient restraint techniques for the frenetic patient Preventive strategies to limit the spread of contagious diseases Assisting with patient exercises
Psychological and religious needs of the patient	Cheering the patient up Playing music Patient education

	Praying with the patient
General	Administering prescribed remedies—internal and external remedies
	Supervising other professionals (e.g., barber)
	Assisting with or performing specialised procedures (e.g., cupping, vesicatories, bloodletting)
	Managing emergent situations in the presence or absence of the doctor (e.g., haemorrhage, syncope)
	End-of-life care

Adapted from Garcia Martinez et al. (2013, pp. 49–53).

A similar list of core nursing cares is also found in Sister Matilda Coskery's *Advices Concerning the Sick* (c. 1840), which was used by the Sisters of Charity in the US during the antebellum (see Box 7.1).

Box 7.1: Overview of nursing cares described by Sister Matilda Coskery in *Advices Concerning the Sick* (c. 1840)

Administration of diet and fluids:

- numerous receipts (recipes) included
- need for the nurse to adhere to the prescribed regimen
- techniques to improve the patient's ease of drinking.

Administration of different forms of remedies:

- blistering (including techniques for applying subsequent dressings)
- emetics
- foot baths
- injection [enemas]
- opiates [for sleep]
- teas and tonics.

Environmental considerations for the sickroom:

- bed-making methods
- hygiene care techniques
- limiting noise (e.g., avoiding over-talking, excessive door opening and shutting)
- maintaining cleanliness (e.g., frequent removal of soiled poultices/clothes, used spittoons, bedpans and changing of bedclothes)
- temperature control strategies
- ventilating the sickroom (e.g., opening doors and windows according to season and disease state, fumigations)

Examination of urine and faecal elimination:

- characteristics of diarrhoea and bilious diarrhoea
- why and how to keep specimens for the doctor.

General fever and relapse management principles

- application of ice or cold cloths for cooling
- cleansing the patient's body and mouth to limit contagion
- diet and fluid management
- limiting open windows or increasing the risk of miasma spread (e.g., fanning quilts)
- limiting the number of visitors,
- managing diaphoresis and shivering.

Increasing the activity levels of the patient:

- cautions about why activity is limited in acute illness
- recommendations for sitting the patient up and gradual mobilisation.

Managing a person with mania-a-potu (delirium tremens) or insanity

- communication techniques (e.g., adopting a calm but firm demeanour)
- limiting risk of harm to self and others (e.g., removing glass objects).

The parallels between the study findings and these other descriptions of pre-professionalised nursing practice suggest that the discrete nursing tasks identified in the corpus that formed a 'thousand nameless acts of kindness and attention' (Waddy, 1846, p. 6) were the fundamentals of early nursing practice performed by the nurse, irrespective of the period, geographical location or vocational persuasion.

These fundamentals of pre-professionalised nursing practice also likely influenced the routine practices of subsequent generations of professionalised nurses. This persisting influence can be observed in twentieth- and twenty-first-century constructs of what constitutes fundamental nursing care. For example, Virginia Henderson's (1966) description of the unique function of the nurse was: 'To assist the individual, sick or well, in the performance of those activities contributing to health or its recovery (or to peaceful death) that he would perform unaided if he had the necessary strength, will or knowledge' (p. 15). Henderson (1964) believed that the nurse's role was to provide and be the 'authority of basic nursing care' (p. 64). Basic nursing

care was defined by Henderson (1964) as 'helping the patient with activities or providing conditions under which he can perform them unaided' (p. 65). Assisting the individual, whether infirmed or healthy, with achieving 14 fundamental needs formed the foundation of basic nursing care (see Box 7.2).

Box 7.2 Henderson's (1964, p. 65) Fundamental Needs

1. breathe normally
2. eat and drink adequately
3. eliminate body wastes
4. move and maintain desirable posture
5. sleep and rest
6. select suitable clothes-dress and undress
7. maintain body temperature within normal range by adjusting clothing and modifying the environment
8. keep the body clean and well groomed and protect the integument
9. avoid the dangers in the environment and avoid injuring others
10. communicate with others in expecting emotions, needs, fears, etc.
11. worship according to one's faith
12. work in such a way that one feels a sense of accomplishment
13. play or participate in various forms of recreation
14. learn, discover or satisfy the curiosity that leads to "normal" development and health and use the available health facilities.

These 14 areas of nursing care addressed the individual's physical, psychological, spiritual/moral and sociological wellbeing (Tourville & Ingalls, 2003) and continue to inspire contemporary acolytes (Achterberg, 2014; Englebright, Aldrich, & Taylor, 2014; Kitson, Conroy, Kuluski, Locock, & Lyons, 2013; Kitson, Conroy, Wengström, Profetto-McGrath, & Robertson-Malt, 2010; Zwakhalen et al., 2018). For example, Kitson et al.'s (2010) preliminary work for the fundamentals of care framework included many of Henderson's fundamental needs, such as assisting with breathing, eating and drinking, elimination, personal cleansing and dressing, rest, controlling body temperature, mobilising, working and playing, sleeping and communication.

More recent iterations of the fundamentals of care framework (Feo, Conroy et al., 2018; International Learning Collaborative, 2019) have described three core elements of care—physical fundamentals of care, psychosocial fundamentals of care and relational fundamentals of care. Within each element exists a list of essential patient needs that the nurse must meet and/or for which nursing actions must be performed (see Table 7.3).

Table 7.3: Elements of the fundamentals of care framework (Feo, Conroy et al., 2018; International Learning Collaborative, 2019)

Domain	Patient need/nursing action
Physical fundamentals of care (patient needs and/or outcomes)	personal cleansing (including oral/mouth care) and dressing toileting needs eating and drinking rest and sleep mobility comfort (e.g., pain management, breathing easily, temperature control) safety (e.g., risk assessment & management, infection prevention, minimising complications) medication management
Psychosocial fundamentals of care (patient needs and/or outcomes)	communication (verbal and non-verbal) being kept involved and informed privacy dignity respect education and information emotional wellbeing having values and beliefs considered and respected
Relational fundamentals of care (nurse actions)	active listening being empathetic engaging with patients being compassionate being present and with patients supporting and involving families and carers helping patients to cope working with patients to set, achieve and evaluate progression of goals helping patients stay calm

The substantial overlap in core nursing actions and duties between pre-professionalised nursing and these twentieth- and twentieth-first-century conceptualisations on the fundamentals of care provides evidence that that the fundamentals of nursing practice are not an invent of modern nursing (Foth, Lange, & Smith, 2018). Rather, contemporary constructs have been influenced by nurses practising long before twentieth-century nurse theorists such as Henderson and nineteenth-century reformists such as Nightingale. This persistence in the conceptualisation of the fundamentals of care intimates that many of our routine practices remain steeped in tradition or are ritualised.

Rituals are routine or repetitive behaviours that occur with little thought or regard to the clinical situation (Strange, 2001; Zeitz & McCutcheon, 2005). Ritualised practices are used by nurses for a variety of reasons, including improving efficiency (Wolf, 2014), reducing cognitive dissonance (Greenway, 2014), affirming the role of the nurse (Biley & Wright, 1997; Wolf 1993), socialising into the role (Wolf, 2014), improving team cohesion (Manges & Groves, 2019; Roberts-Turner et al., 2016) and reducing anxiety (Philpin, 2002; Strange, 2001). However, rituals can also be a symptom of poor practice or a stagnant organisational culture, as symbolised through a 'we've-always-done-it-this-way' mentality that sometimes exists within nursing subcultures (Strange, 2001).

This study identified multiple rituals described in the corpus that remain extant in contemporary nursing. Table 7.4 provides an overview of areas in which there remain persistences today. The most notable persistences in practice were found in the promoting comfort domain, with the guiding principles in how to: promote sleep and rest, provide emotional and pastoral support to the patient, dress or undress the patient, change an occupied bed and prevent pressure injuries almost identical to current recommendations.

Table 7.4: Persistences in practice of nursing interventions found under the themes of restoring health, preventing complications and promoting comfort

Restoring health	Preventing complications	Promoting comfort
The ’5 Rights’ of medication administration Distraction techniques used while administering the medication to a child Therapeutic positioning for some procedures (e.g., Sims’s position for enema administration) Landmarks used to discern underlying body organs	The need for a clean clinical environment Isolating contagious patients away from others Observed aspects of faecal and urinary elimination patterns Observing the pulse for rate, rhythm, strength and bilateral symmetry Indications for physical assessment	Being with the patient Emotional support Diversional therapies Pastoral support Use of underpads to manage incontinence Sleep hygiene practices Bed-making Dressing the patient with a hemiparesis Staged approach to increasing activity Pressure injury prevention strategies

The existence of such persistences in practice are polemic for some modern-day professional constructs. First, they provide evidence that many facets of routine nursing tasks remain influenced by rituals. Such rituals are often latent or inferred, and as such, their inclusion is commonly perceived as a barrier to the implementation of, or adherence to, evidence-based nursing practice (Wolf, 2014). However, certain rituals’ (e.g., the ‘5 rights’ method of medication administration) transcendence across time and cultures indicates that their role in nursing may not be entirely negative. Rather, they may have an important role in informing current and future nursing practice. Further research is needed to explore how rituals can coexist and evolve alongside with scientific advancement (Wolf, 2014).

These persistences in practice also highlight the dearth of empirical evidence about the fundamentals of care. For a profession that espouses to be evidence-based, it appears many of the principles guiding the how and why of performing fundamental cares continue to be rooted

in longstanding traditions (Zwakhalen et al., 2018). This lack of evidence is worrying for the profession given the centrality of these cares to nursing work and nursing's identity (Jackson & Kozlowska, 2018; Zwakhalen et al., 2018). One reason this phenomenon possibly exists in nursing may be because of the nature and quality of research currently being conducted to evaluate the effectiveness of nursing interventions for fundamental care. A recent systematic review on four main pillars of fundamental care—nutrition, elimination, mobilisation and hygiene cares—found that the topic is understudied and the current evidence for these foundational interventions largely lacks rigour and is too far removed from clinical practice to provide meaningful evidence-based guidance for nurses at the bedside (Richards, Hilli, Pentecost, Goodwin, & Frost, 2018). This phenomenon may also be a result of the profession and broader health community (sub)consiously devaluing the role and complexity of fundamental nursing interventions (Kitson et al., 2019). Using the term 'basic nursing care' instead of 'fundamental nursing care' can imply that such nursing cares are simple tasks that require minimal knowledge or skills to perform, and therefore, can be performed by almost anyone (Aranda & Brown, 2006; Feo & Kitson, 2016; Macmillan, 2016). Such underlying biases may impede researchers' and funding bodies' views towards the worthiness of research on this underresearched topic (Feo & Kitson, 2016). To counteract this phenomenon, the profession needs to refocus its attention towards researching the most often perfomed nurisng tasks (Richards & Borglin, 2019; Richards et al., 2018; Zwakhalen et al., 2018). This renewed research agenda will strengthen nursing's unique knowledge base and possibly negate the erosion of care standards presently faced by the profession (Feo & Kitson, 2016; Jackson & Kozlowska, 2018).

The persistences in practice found in this study also raise questions about the legitimacy of the profession's responsiveness to new evidence. The study found that considerable time is required for new nursing practices (e.g., the introduction of pulse assessment) or techniques to be

universally accepted as routine practice. This finding concurs with other historical studies exploring the evolution of nursing praxis, such as Wood's (2009) study that examined the surgical nurse's role in preventing wound sepsis in the pre-antibiotic period (1895–1935). Wood (2009) reported that it took several decades for observable changes to occur in surgical nurses' roles and responsibilities. Collectively, these findings suggest practice changes take time and are unlikely to be affected by a single event, such as the release of a new book or the findings from a recent clinical study (Boschma et al., 2009; Wood, 2009).

Additionally, the findings from this study stress that the profession needs to be wary of how we appraise and construct nursing knowledge. The study's findings provide a testament to the profession's historical roots and illustrate that these roots have informed, shaped and constrained how nursing is practised today (Fairman & D'Antonio, 2013; Lewenson et al., 2017). The persistence of several core philosophies and principles within the corpus demonstrate that the profession needs to be more critical in accepting that nursing knowledge and praxis is continuously evolving (Wood, 2009).

The findings from this study also highlight the possible harm that can occur if nursing fails to acknowledge these persistences in practice. Adopting a perspective that new nursing knowledge and practice is discontinuous from the past is detrimental because it precludes the profession from fully understanding the context of why healthcare issues continue to prevail or resurface over time (Fairman & D'Antonio, 2013; Nelson & Gordon, 2004). Such dislocations between past and present can also prevent the profession from learning from past mistakes or identifying unorthodox solutions to resolve issues currently faced by nurses (Lewenson et al., 2017). Further, it creates a scotoma that is potentially injurious to our attempts to maintain professional status because it exudes an image of professionals that are uncomfortable with or ambivalent

towards the ontological foundations of their field (Nelson, 2009; Nelson & Gordon, 2004). Fixing this dislocation is essential to closing the debate about nursing's professionalisation.

7.5 Revising the Legacy and Myth of Nightingale

By using the findings of this study to reframe the past and resituate the present, it is evident that it is time for the profession to reinterpret Nightingale's contributions to the profession. The findings from this study are problematic for how we should now appraise Nightingale's impact on the profession. They challenge what we have always widely accepted as truth about the Nightingale-led reformation by deconstructing many of the long-held beliefs about the origins of 'modern' nursing, including Nightingale's contribution to nursing theory and practice. Reconciling these findings and their potential meanings for the profession is no simple task—it requires a profound paradigm shift. In many ways, it may be easier for the profession to continue to propagate the Nightingale legacy because this strategy saves nursing from having to rethink its past and professional identity. However, these findings also offer a unique opportunity for the profession to take stock and re-examine its assumptions and presumptions about early nursing praxis, giving the profession an opportunity to reconstruct a fresh and more inclusive narrative.

To achieve this paradigm shift, the profession must first deconstruct and re-evaluate the metanarratives that surround Nightingale's contribution to nursing. This study has found that many of Nightingale's ideas about what nursing was and was not were borrowed ideas. The findings also suggest that the ideas presented by Nightingale in works such as *Notes on Nursing* were somewhat less developed than earlier iterations. In part, this simplicity may have been a result of Nightingale's relative inexperience as a nurse compared with other nurse-authors, such as Andres Fernandez and Simon Lopez in the seventeenth century and Sister Matilda Coskery in the nineteenth century. Such authors had decades, as opposed to months, of nursing

experience prior to writing their respective nursing treatises. This simplicity may also be attributable to other sociocultural factors of the period in which Nightingale practised, such as the gendered constraints imposed on women during Victorian Britain. Alternatively, the simplicity may be a legacy of the intended audience for whom Nightingale wrote. For example, *Notes on Nursing* was never intended to be a guide for training nurses. Moving forward, it is time for the profession[95] to stop citing *Notes on Nursing* as a handbook that described early nursing practice and instead acknowledge that Nightingale never produced a suitable guide for hospital or acute nursing (Smith, 1982).

Equally important in achieving this paradigm shift is to reconsider how Nightingale and her contributions are described within and outside the profession. Sweeping claims about Nightingale's contributions to nursing such as 'she virtually created the profession on her own' (Zinner, 2014, p. 412) reinforce an insular perspective of the history of nursing. One-dimensional representations such as this are not only inaccurate, they overshadow the contributions made by other secularised and religious nurses prior to and during Nightingale's reign (Nelson & Gordon, 2004; Stanley, 2007). Further contributing to this problem is the continual reference to Nightingale as the founder of modern nursing (Arnone & Fitzsimons, 2015; Clements & Averill, 2006; Dossey et al., 2019; Ellis, 2019; Hegge, 2011; Karimi & Masoudi Alavi, 2015; Lee et al., 2013; MacMillan, 2012; MacQueen, 2007; Magpantay-Monroe, 2015; McDonald, 2009, 2014, 2018; Winkelstein, 2009). Such referential statements are detrimental to the historiography of the profession because they ignore the heterogeneity and complexity of pre-professionalised nursing praxis (Gordon & Nelson, 2006).

Similarly harmful are assertions that Nightingale would know what to do with the contemporary healthcare issues facing the profession. For example, McDonald (2018) recently proposed that

[95] I note that this is more common in non-historical papers.

Nightingale's 'evidence-based approach to nursing' could be used to counteract 'antibiotic-resistant germs' (p. 6), thereby inferring nineteenth-century miasmic theory is an appropriate strategy in achieving antimicrobial stewardship. Broad-sweeping claims such as this assertion trivialise nursing's ability for, and expertise in, contributing to the establishment of governance structures to address global health problems. While these assertions may appear relatively benign to an uncritical eye, such indiscriminate comments can reinforce traditional social narratives that nursing knowledge is primarily based on technical skills—the 'doing'—as opposed to the intellectual knowledge displayed by medicine—the 'thinking' (Gordon & Nelson, 2006; Trieber & Jones, 2015). Hence, such comments may furtively diminish nursing's ability to be recognised as health experts and leaders in health care by discrediting its social legitimacy as no more advanced than that of Nightingale's era (Hoeve et al., 2014; Gordon & Nelson, 2005, 2006; Nelson & Gordon, 2004).

While embarking on this paradigm shift requires the profession to release some of its long-held ideologies about Nightingale, we do not need to emancipate ourselves from her entirely. Instead, we need to reinterpret her contributions to nursing. By bestowing her imprimatur on nursing, Nightingale elevated it to an acceptable vocation for women in the nineteenth century (Smith, 1982), a gentrification facilitated through her upper-class status and close links to those in power (Hawkins, 2010). Using these connections, coupled with her writing skills, Nightingale gained celebrity status and was able to advocate for numerous social reform initiatives, including nursing's reformation. Nightingale was essentially a popular 'social media influencer' of her time—she was able to sell the message for reform by using her privilege and the voice afforded to her by this privilege, but the message was necessarily born out of her own ideas or revelations. This in itself is a profound achievement, but whether we continue to celebrate Nightingale as the founder of modern nursing needs further debate.

7.6 Summary

This chapter has expounded the study's findings using a postmodernist lens. It has discussed the findings in the context of historical and contemporary literature. In this discussion, the findings were used to highlight reasons that the profession needs to reframe its understanding of early nursing praxis, including the merits of constructing a more balanced and inclusive history of pre-professionalised nursing. Within this discussion, popular discourse about Nightingale's contributions to the profession were presented before using the findings to reframe current constructs about the past. The findings of this study were then used to resituate the present conceptualisations of nursing theory and practice by highlighting the persistences in praxis and debating how these persistences are problematic for assumptions about how we inform and transform nursing praxis. This discussion was then used to reinterpret Nightingale's legacy to nursing. In Chapter 8, a synopsis of the study is presented. This chapter evaluates the findings against the research question, evaluates the rigour of the study and identifies the implications and limitations of the study, prior to making recommendations for future research.

Chapter 8: Conclusion

8.1 Introduction

The aim of this study was to conceptualise the progression of nursing theory and praxis prior to the nineteenth-century reforms that led to professionalisation. The previous chapters outlined the research design and methods used to address this aim, presented the research findings and discussed how these findings are situated within past and present constructs of nursing praxis. This chapter concludes the thesis, commencing with a summary of the research. A critique of the quality and rigour of the study will then be presented before outlining the implications and recommendations arising from the study and its findings. The chapter concludes by outlining the limitations of the study.

8.2 Study Summary

The purpose of this study was to examine the conceptualisation of early nursing theory and praxis through the analysis of digitised primary sources published prior to *Notes on Nursing: What It Is and What It Is Not* (Nightingale, 1859). An interpretive approach that used postmodernist historical methods was identified as the most appropriate methodology for this research. The method used in this research was a combination of traditional historical methods (e.g., source criticism, close reading and the use of footnotes) and non-traditional historical methods (e.g., conducting a scoping review to collect sources and performing a thematic analysis of the corpus). Through this research, a corpus of 24 digitised primary sources describing early nursing praxis were located and presented as an annotated bibliography in Chapter 5. The corpus was thematically analysed to generate a collective interpretation detailing the core features of pre-professionalised nursing theory and praxis (see Chapter 6). The key elements of the study are summarised in Table 8.1.

Table 8.1: Key elements of the study

Criteria	Recommended strategies for qualitative research
Research aim	The aim of this research was to conceptualise the progression of nursing theory and praxis in Western countries prior to the nursing reforms of the mid-nineteenth century.
Research questions	The research questions that guided this research were: What manuscripts describing nursing practice were produced in Western countries prior to 1859? How was nursing theory and praxis conceptualised prior to professionalisation?
Research design	Postmodernist historical methods consisting of four phases: • development of a scoping review protocol • implementation of the scoping review • analysis and interpretation • dissemination.
Findings	The key findings of the study were: • 24 digitised primary sources that describe early nursing praxis were located during the scoping review • recognition that the fundamentals of early nursing care primarily consisted of interventions believed to restore health, prevent complications and/or promote comfort.

The first research question was addressed in Chapter 5. Box 8.1 details the bibliographical details of the corpus.

Box 8.1: Bibliographical details of the corpus

Anonymous. (1524). *Constituciones del Gran Hospital Real de Santiago de Galicia hechas por el Señor Emperador Carlos Quinto* [*Constitutions of the Great Royal Hospital of Santiago, Galicia made by Emperor Charles V of glorious memory*]. Valladolid, Spain: S. n.

Anonymous. (1590). *Constituciones del Hospital Real de Santiago de Galicia* [*Constitutions of the Royal Hospital of Santiago, Galicia*]. Madrid, Spain: S. n.

Anonymous. (1836). *Manuel de medecine et de chirurgie a l'usage des soeurs hospitalieres* [*Manual of medicine and surgery for the use of hospital sisters*] (Vols. 1 and 2). Paris, France: Baillere.

Carrère, J. B. F. (1786). *Manuel pour le service des malades* [*Manual for the service of the sick*]. Paris, France: Lamy.

Congregation of Bernardino de Obregon. (1634). *Constituciones y regla de la Minima Congregacion de los Hermanos enfermeros pobres* [*Constitutions and rules of the Congregation of the Brothers Minima Poor Nurses*]. Madrid, Spain: Francisco de O'campo.

Dieffenbach, J. F. (1832). *Anleitung zur krankenwartung* [*Instructions for nursing*]. Berlin, Germany: A. Hirschwald.

Fernandez, A. (1625). *Instruccion de enfermeros* [*Instructions for nurses*] (J. Salavert, Trans.; 2nd ed.). Madrid, Spain: Imprenta Real.

Fodéré, F.-E. (1815). *Manuel du garde-malade, des gardes des femmes en couches et des enfans au berceau* [*Manual for nurses, midwives and care of infants*]. Strasbourg, France: Levrault.

Gedike, C. E. (1837). *Anleitung zur krankenwartung* [*Instructions for nursing*]. Berlin, Germany: August Hirschwald.

General Hospital of Madrid. (1760). *Constituciones y ordenanzas para el gobierno de los Reales Hospitales General y de la Passion de Madrid* [*Constitutions and orders for the government of the General Hospital of Madrid and Hospital of Passion*]. Madrid, Spain: Antonio Marin.

Greiner, G. F. C. (1809). *Anleitung zur allgemeinen krankenpflege: Ein handbuch für krankenwärter* [*Guide to general nursing: A handbook for nurses*]. Eisenberg, Germany: S.n.

Hanbury, E. B. (1825). *The good nurse; or, hints on the management of the sick and lying-in chamber, and the nursery*. London, England: S. Prowett & W. Phillips.

Johnson, R. W. (1819). *The nurse's guide, and family assistant: Containing friendly cautions to those who are in health: With ample directions to nurses and others who attend the sick, women in child-bed, &c*. (2nd US ed.). Philadelphia, PA: Anthony Finley.

Longshore, J. S. (1842). *The principles and practice of nursing, or a guide for the inexperienced*. Philadelphia, PA: Merrihew & Thompson.

Mai, F. (1784). *Unterricht für krankenwärter zum gebrauche öffentlicher vorlesungen* [*Teaching for nurses for the use of public lectures*] (2nd ed.). Mannheim, Germany: Schwan.

Martin, A. (1832). *Die kunst, den kranken, zu pflegen mit besonderer rücksicht auf cholera-kranke: Leitfaden für krankenwärter* [*The art of caring for the sick, with special regard to cholera patients: Guide for nurses*]. Munich, Germany: Georg Franz.

Nightingale, F. (1858). *Subsidiary notes as to the introduction of female nursing into military hospitals in peace and in war*. London, England: Harrison and Sons.

Roma, F. M., & Cabreyra, G. R. (1753). *Luz da medicina prática racional e metódica: Guia de enfermeyros, directório de principiante* [*Light of practical and rational methodical medicine: A guide for nurses, directory for beginners*] (9th ed.). Coimbra, Portugal: Francisco de Oliveyra.

Royal Hospital of Santiago. (1804). *Constituciones para el regimen y gobierno del Hospital Real de la Ciudad de Santiago, y administración, cuenta y razón de sus bienes y rentas* [*Constitutions for the regime and government of the Royal Hospital of Santiago and administration, an account of their assets and income*]. Madrid, Spain: Imprenta Real.

Schmidt, M. F. (1831). *Unterricht für krankenwärter* [*Lessons for nurses*]. Vienna, Austria: Carl Gerold.

Serain, P. E. (1777). *Instructions pour les personnes qui gardent les malades* [*Instructions for people who keep the sick*]. Amsterdam, The Netherlands: S. n. Retrieved from https://gallica.bnf.fr/ark:/12148/bpt6k110146c/f2.image

Sieveking, E. (1846). *The training institutions for nurses and the workhouses: An attempt to solve one of the social problems of the present day*. London, England: Williams & Norgate.

South, J. F. (1857). *Facts relating to hospital nurses, in reply to the letter of 'One who has walked a good many hospitals,' printed in The Times of 13th April last: Also, observations on training establishments for hospital and private nurses*. London, England: Richardson Brothers.

Waddy, J. M. (1846). *On the education of nurses: An address to the subscribers and friends of the lying-in hospital, Birmingham*. London, England: Sherwood, Gilbert & Piper.

The second research question was answered in Chapter 6 by detailing the scope and breadth of pre-professionalised nursing praxis. These findings were presented under three main themes:

restoring health, preventing complication and promoting comfort. Table 8.2 summarises the themes and subthemes identified in the analysis.

Table 8.2: Themes and subthemes identified in the corpus

Theme	Subthemes
Restoring health	Preparing and administering therapeutics Specialised clinical procedures
Preventing complications	Assessment and observation Maintaining a 'safe' environment
Promoting comfort	Easing spiritual and emotional distress Preserving the patient's dignity Encouraging adequate sleep and rest

This research makes an original contribution to knowledge in nursing by conceptualising the quotidian nursing roles and responsibilities of pre-professionalised nurses in Europe and North America between the fourteenth and mid-nineteenth centuries. This collective conceptualisation articulates the nature of early nursing work and elucidates the influence of long-held ideologies, knowledge, attributes and behaviours on current nursing praxis.

8.3 Quality and Rigour

Quality in historical research is mostly demonstrated through the quality of the researcher's interpretation and the subsequent narrative produced (L'Estrange, 2014). Considerations for determining whether the historical research is a quality product include whether the researcher's interpretation is plausible, demonstrates respect for the context and available evidence, and is able to make sense of the phenomenon, event or epoch under investigation (L'Estrange, 2014). Table 8.3 presents the criteria used to assess quality in this study. This model augmented Birks and Mills's (2011, as cited in Birks, 2014b, p. 224) criteria for determining quality in qualitative research by incorporating additional historical method-specific norms and practices recommended by Donnelly and Norton (2011).

Table 8.3: Criteria for evaluating quality in this study

Domain	Performance indicators	Evidence
Researcher expertise	Demonstrated skills in historical method, the use of digital technologies and scholarly writing	Chapters 1–8
	Extensive reading of available literature on historical methods and qualitative analytical approaches	Chapters 3 & 4
	Declaration of past scholarly activities within the fundamentals of care context	Prologue, Chapters 1 & 4
	Limitations in study design and methods are acknowledged	Chapter 8
Methodological congruence	Philosophical stance declared	Prologue, Chapters 1 & 3, Epilogue
	Research aims clearly stated	Chapters 1, 4 & 8
	Methodological approach to achieve aims articulated	Chapters 1,3, 4 & 8
	Conforming with core tenets of historical method e.g., use of footnotes, bibliographical referencing, source criticism, quotations, narrative[1]	Chapters 1–8
Procedural precision	Audit trail maintained	Adherence to scoping review protocol, translation protocol, use of source criticism appraisal tool, memoing
	Data management of primary and secondary sources	Use of EndNote x8 and NVivo 11
	Demonstrating procedural logic	Chapters 2–7
Interpretation of the historical phenomenon, epoch or event[1]	Use of recognised interpretative model	Interpretivist/postmodernist lens, Chapters 2, 6, & 7
	Creation of a plausible, intra- and inter-coherent interpretation	Chapters 2, 6 & 7
	Inclusion of substantiating and countervailing evidence	Chapters, 2, 5, 6, 7, use of footnotes
	Respect for context of epoch and historical evidence	Chapters, 2, 5, 6, 7, use of footnotes
	Gaps or uncertainties of knowledge declared to the reader	Chapters 1, 2, 5–8
	Defence of controversial interpretations explained to the reader	Chapters 2, 5–7

[1] Added from Donnelly & Norton (2011, p. 59); adapted from Birks and Mills (2011) and Donnelly and Norton (2011).

Mays and Pope (2000) also suggested that research quality must be judged from the worth or relevance of the study itself. After reflecting on the findings of this study, their debunking of narratives about early nursing in mainstream discourse, and their ability to stimulate debate about the current and future direction of nursing practice, I have deemed that conducting this research was a worthwhile activity for individual and collective reasons. From an individual perspective, this research has changed how I view myself as a registered nurse, prompting me to reflect on how I learnt, practice and educate others on the art and science of nursing. It has also led me to question the validity of evidence-based health care by drawing my attention to certain entrenched, sometimes dehumanising, traits that continue to be practised within health. From a collective standpoint, this research is worthwhile because of its generation of new insights and knowledge about pre-Nightingale nursing. Sharing these insights with the profession may help to reinterpret the roles and functions of the contemporary nurse. As a result, this demonstrable relevance adds evidence to the quality of the overall study.

Demonstrating a rigorous approach in the research process is also essential in proving the research is a quality product (Birks, 2014b). As a novice researcher, I found the ambiguity that surrounds rigour in historical research perplexing. My inquisitiveness to discover how to be rigorous when conducting this study led me to write 'Separating "fact" from fiction: Strategies to improve rigour in historical research' (see Chapter 3). This paper examined strategies historical researchers could incorporate into their study design to improve the overall rigour of their research by applying Lincoln and Guba's (1985) four criteria for establishing trustworthiness in qualitative inquiry—credibility, confirmability, dependability and transferability. Table 8.4 summarises how the strategies employed in this research met Lincoln and Guba's criteria for trustworthiness.

Table 8.4: Lincoln and Guba's (1985) criteria for determining trustworthiness in qualitative studies and the strategies used in this research

Criteria	Recommended strategies for qualitative research	Strategies used in this research
Credibility	Prolonged engagement Persistent observation Triangulation Member checking Peer debriefing Negative case analysis Referential adequacy (archiving of data)	Performance of source criticism Engagement with content Engagement with context Interpretations are grounded in evidence Referential adequacy
Dependability	Overlapping methods Audit trail Stepwise replication of processes	Detailing the study design in the narrative (Chapter 4) Scoping review protocol Translation protocol Other audit trails (e.g., source criticism appraisal tool, coding, memoing and annotations within NVivo 11)
Confirmability	Triangulation Audit trail Reflexive techniques	Scoping review protocol Other audit trails (e.g., coding, memoing and footnotes) Comparison of findings to related early Modern nursing studies Reflexive techniques (e.g., use of oral and written memos)
Transferability	Thick description	Generation of a richly contexualised narrative through the wide use of direct quotations Discussion chapter (Chapter 7)

8.4 Implications and Recommendations

This study has implications for how the profession presently views past and current constructs of nursing. Significantly, this study disrupts and challenges populist beliefs about pre-Nightingale nursing by facilitating a new interpretation of early nursing praxis, while also stimulating debate about the procedures and principles of 'doing history' in the twenty-first

century. These implications and subsequent recommendations are discussed separately in Sections 8.4.1–8.4.2.

8.4.1 Redirecting the future of nursing

The study findings not only have implications for how nursing *reframes its past* and *resituates the present*, they also highlight the opportunity to *redirect the future* of nursing in several ways. First, the findings have dislocated popular narratives about the nature and scope of pre-professionalised nursing practice and debated the legitimacy of common assertions about Nightingale's contributions to the profession. These findings have implications for how we, as a profession, perceive and portray early nursing, within and outside the profession. Continuing to perpetuate the retelling of the Nightingale-centric narrative privileges only a single, piecemeal history of nursing—a history that is potentially damaging to our social legitimacy because of its subliminal reinforcement of nineteenth-century discourses of patriarchy, subservience and a generalised mistrust of nurses' intelligence.

To transcend this omnipresent rhetoric, the profession needs to become more erudite with and engaged in its history (Smith, 2020). Nurse leaders, educators and researchers have a distinct role in shifting this mindset to generate a more inclusive history of nursing. Strategies to achieve this shift include progressing from promulgating half-truths and untruths about Nightingale's legacy to modern nursing, creating more readily available learning resources about pre-professionalised nursing, raising the profile and presence of nursing history within nursing education, research and practice and expanding the scope of historical research on pre-professionalised nursing. The profession also must reconsider how it uses Nightingale as a figurehead of nursing. This in itself is an ironic position to be in, with the linkage of this year's celebrations for the International Year of the Nurse and Midwife with the bicentenary of Nightingale's birth (International Council of Nurses, 2020).

Second, the findings from this study highlighted persistences in nursing theory and praxis that have endured for several centuries. These findings challenge common assumptions about how contemporary nursing knowledge and practice is generated. The study's findings also allow for deeper contextual insights into how and why 'modern' problems prevail in nursing (e.g., tolerating chronic understaffing by 'making do') by exposing the tenacity of latent historical factors, such as unspoken ideologies about selflessness. The implications arising from these findings includes the need for the profession to revisit its understanding of the influence of tacit knowledge (e.g., ideologies, rituals and phronesis) in the context of a profession that strives to be evidence-based. Further, the profession needs to be more open to questioning whether new knowledge is actually new or possibly a reincarnation of previous knowledge. Therefore, further research is required to explore how these often-unspoken traditions, rituals and ideologies influence the performance of nursing work in contemporary clinical environments.

Third, the findings from this study indicate that most elements within contemporary conceptualisations of fundamental nursing cares are historically informed. The profession currently undervalues the symbolic representation of the fundamentals of nursing care, even though it forms most point-of-care work. This undervaluing is problematic for not only for our professional identity—it is intrinsic to who and what we do as nurses—it is also damaging to our public image. Much of this damage is the result of reports of nurses failing to meet essential patient care needs in landmark inquiries, such as the 2013 English *Mid Staffordshire National Health Service Foundation Trust Public Inquiry* [the *Francis Inquiry*] and the 2015 Irish *Report of the Investigation into the Safety, Quality and Standards of Services Provided by the Health Service Executive to Patients in the Midland Regional Hospital, Portlaoise*. The detailing of episodes of gross nurse neglect arising from these inquiries, media reports of younger nurses being 'too posh to wash' (Beer, 2013) and the growing research on the (re)emergence of missed

nursing care provide strong evidence that eroding care standards has become a systemic, yet normalised, problem within nursing (Richards & Borglin, 2019).

The profession urgently needs to redress this erosion of care and resituate its social contract with society by revaluing and honouring the fundamentals of nursing care (Richards & Borglin, 2019). Nurse educators, leaders and researchers must be at the forefront of reorientating the profession to the primacy of nursing work—the fundamentals of care. For nurse educators, this reorientation requires critical reflection on how we implicitly and explicitly share our philosophies about the fundamentals of care to the current and future workforce. One strategy to help correct the current state of 'shitty nursing' (Richards & Borglin, 2019, p. 148) is for nurse educators to be positive role models for nursing students and novice clinicians. Examples of how this positive role modelling can be accomplished include: the nurse educator avoiding words such as 'basic' or 'simple' as synonyms for 'fundamental' or 'essential' when describing the fundamentals of care and dedicating more time to demonstrating the nuanced complexity of providing this essential care in the simulated environment. For nurse leaders and decision-makers, this reorientation means that there must be a disruption to the discourse that the fundamentals of care can be safely task-shifted to unregistered workers to reduce costs or resources. Instead, adopting a top-down leadership style that reprioritises and instils a zeal for excellence in the fundamentals of care can assist with this reorientation. To achieve this reprioritisation, nursing needs to be its own advocate by politicking for better conditions and standards for nurses at the point-of-care, such as demanding more resources so that adequate time can be dedicated to providing quality patient care. Finally, a renewed research agenda that refocuses attention to the fundamentals of care is urgently required to strengthen the evidence of these core nursing practices. The recommendations for nursing education, practice, policy and research arising from this research are summarised in Table 8.5.

Table 8.5: Recommendations for nursing education, practice, policy and research

Context	Recommendations
Education	Cultivate a culture within nursing education in which a more authentic history of nursing is integrated into the current theoretical and practical preparation of nursing students.
	Develop learning resources detailing the history of pre-Nightingale nursing for use with pre-service nursing students.
	Emphasise the importance of fundamental nursing cares as being a core aspect of our professional role, identity and work.
Practice	Generate a more inclusive history of nursing for future generations by acknowledging and capturing the everyday stories of nurses.
	Cease referring to Nightingale as the original theorist or inventor of fundamental nursing principles.
	Use historical exemplars of the persistences in praxis to validate the centrality of fundamental cares to nursing.
Policy	Reframe how the fundamentals of care are valued within and outside the profession.
	Improve nurse leaders' and/or policymakers' accessibility to the histories of nursing so that they are better informed of latent historical factors that continue to shape or constrain nursing practice and/or health care.
	Strengthen nursing's professional identity and social legitimacy by actively rejecting negative stereotypes, archetypes and falsehoods.
Research	Increase the evidence base for the fundamentals of care in contemporary nursing.
	Explore how unspoken traditions and ideologies influence the performance of nursing work in contemporary clinical environments.
	Investigate the nature of early nursing work and pathways to professionalisation in other geographical locations and/or cultural groups.

8.4.2 Redirecting the future of history

The nascent methods used in this study also have implications for the discipline of history in the digital age. The 'digital turn' presently occurring in historical methods enables the twenty-first century historian to embark on new ways of 'doing history'. Despite the seemingly endless possibilities afforded by the 'digital turn', many technology-assisted methods for data collection and analysis remain under-experimented and under-evaluated (Koolen, van Gorp, & van Ossenbruggen, 2018). This study has demonstrated one way to integrate relatively user-

friendly digital technologies into the entire research process. The outcomes from this integration are numerous, including increasing the speed and breadth of discovery and improving the transparency of historical analysis. Nonetheless, these technology-assisted methods required considerable trial and error to develop a workable model, a task that could have be circumvented had there been more dialogue surrounding the use of technology in historical methods. Therefore, a further recommendation arising from this study is the need for more practical guides on how to undertake historical research in the 'digital age', including in the subfield of nursing history.

An additional recommendation arising from this study is the identification of scope for the development of a 'one-stop' consolidated digital tool to assist with conducting historical research. The creation of such a tool would benefit historical research by a) assisting historians who unfamiliar or reluctant to use digital technologies to gain confidence in navigating this new terrain; and, b) assisting in the auditability, and thus rigour, of historical research.

8.5 Strengths of the Study

As discussed previously, quality and rigour are demonstrated through the processes and product of this research. These areas are considered particular strengths of this study:

- development of a search protocol that served as an audit trail and improved the study's reproducibility
- the researcher's scholarly and educational expertise in contemporary fundamental nursing care that allowed the researcher to produce sophisticated comparisons between past and present pedagogical elements and key content
- two papers generated from this study (one published, one under review) regarding strategies to improve the methodological literacy of historical methods

- demonstrated rigour and transparency throughout the research process through engagement with digital technologies
- a critical analysis of nursing practice rather than historicisation of a single nurse or group of nurses
- stimulated discussion and interest about the topic of pre-professionalised nursing praxis at several, including six international, nursing conferences.

8.6 Limitations

There are several limitations to this study. Study limitations are areas of weakness within the research design that have the potential to influence the findings and implications of that study (Ross & Bibler Zaidi, 2019). Identifying the limitations of a study is an important mechanism to enhance the transparency of the research to the reader, allowing them to better discern the transferability and credibility of the findings by situating the research and its findings in an appropriate context (Connelly, 2013; Ross & Bibler Zaidi, 2019). The main weaknesses of this study—potential researcher bias; potential gaps in conceptualisation; and potential misinterpretation and misrepresentation of the data—are discussed below.

8.6.1 Potential researcher bias

A major risk for all historical studies is the potential for researcher bias. This risk is an inherent weakness in historical methods because 'the facts speak only when the historian calls on them: it is he (or she) who decides to which facts to give the floor, and in what order or context' (Carr, 1961, p. 9). As such, a degree of subjectivity will always be found in historical studies because it is the researcher who discerns which 'evidence' to privilege to the reader (Howell & Prevenier, 2001). It is impossible to guarantee that a historical account is devoid of subjectivity, even if it strove to adhere to Rankean principles of presenting only a single truth or reality (Boschma et al., 2008). Measures to mitigate this risk in this study included reflecting and

declaring my worldview, background and past experiences (see Prologue and Chapter 1), choosing postmodernist historical methods to counteract the deficits of Rankean historical method (see Chapter 3) and employing methods that enhance the auditability of the study (see Chapter 4).

Engaging in reflexivity also assisted in identifying my ideological positioning as a nurse, nurse academic and nurse historian. Reflexive activities undertaken during this research include memoing (written and voice recorded reflections), checking my interpretations with others (e.g., supervisors, other historians and against secondary sources) and regularly engaging in mindfulness, as discussed previously. Such activities helped me identify how my professional identity, research interests, nursing expertise and assumptions about the past may have influenced how I (re-)interpreted the sources (Boschma et al., 2008). Thus, these activities have helped reduce the level of bias present in this study.

8.6.2 Potential gaps in conceptualisation

Historical studies are also prone to gaps in conceptualisation because of the risk of studying incomplete data (Lewenson, 2008). In this study, the nascent methods used may have further led to this phenomenon occurring in two different ways. First, the eligibility criteria applied in this study is a potential limitation of this research. The protocol developed for this study stipulated that digitised primary sources had to be available for their inclusion in the study. This stipulation prevented the inclusion of other relevant primary sources that were only available in analogue form. Adhering to this inclusion criterion may have compromised the completeness of my conceptualisation.

Second, restricting inclusion criteria to primary sources that had been first published in Western countries was another potential limitation of the study. This limitation was imposed to ensure study feasibility but meant that I failed to study early nursing work from a global perspective.

Consequently, a recommendation arising from this study is that it should be replicated to examine how early nursing praxis was practised in other distinct geographical regions (e.g., from an Eastern or Middle Eastern perspective). In doing so, a more holistic representation of early nursing praxis will be made available for the profession.

8.6.3 Potential misinterpretation and misrepresentation of the data

In any historical study, there is always the risk of misinterpretation because of the age and ambiguous nature of some data (Francis, 2013; Lewenson, 2008). This risk was closely monitored throughout this study, yet it remains a potential limitation for several reasons.

First, the age of the sources meant that my understanding of certain phrases or terminology may have possibly been different to the authors' original intention. In this study, there were countless examples of when an archaic word's meaning was different to its present-day meaning. For example, the word 'injection' was commonly used in the corpus to indicate an enema. This potential limitation of misinterpretation was reduced by cross-referencing between sources, using secondary sources to contextualise the study and accessing digitised copies of old dictionaries to confirm that my understanding of a term was correct. Nonetheless, it is impossible to know whether my interpretation of individual concepts or collective themes within the corpus is accurate because it was impossible to use member checking in this study.

The combination of the epoch studied and my inability to engage in member checking also made it difficult to fully discern the extent to which the recommendations found in the sources were adopted into clinical practice. It is important to recognise that a range of contextual factors may have limited the adoption of recommended best practice principles outlined in the sources, including limited distribution of the book, internal workforce and resourcing issues. Another potential risk is that some books (e.g., the various hospital constitutions) may have been written as propaganda to help restore the public's faith in health service provision, and by proxy, the

church and state. Performing source criticism and incorporating secondary sources into the study helped reduce this limitation by deepening understanding of the contextual factors of each source and the epoch.

Second, my interpretation of the non-English sources was another potential limitation of this study. Conducting a study that analysed five different archaic languages was challenging and would have been near-impossible 10 years ago because of: a) the relatively low numbers of primary sources that had been digitised at that stage; and b) the rudimentary MT tools available at that stage. Adhering to the translation protocol assisted with mitigating this limitation, as did my evolving familiarity with these languages. Another strategy that was helpful in limiting this risk was the grouping of common language sources during analysis. By grouping like-language sources together, I translated and closely read sources written in the same language before moving onto a new language group. Adopting this approach allowed me to be immersed in one foreign language at a time and expedited my confidence in being able to read and comprehend these sources, whether in raw form or while comparing and editing the two different versions of the translation. This technique was particularly helpful when translating and reading the Romantic language sources (i.e., the French, Portuguese and Spanish sources). These languages are derived from Latin, so there was overlap and similarities in word use across these source. The Latin origins of many medical terms used today also made these medical conditions and treatments easy to identify when reading the raw data. Additionally, the ability to access digitised copies of old bilingual dictionaries on sites such as Google Books also helped clarify the meaning of archaic words.

Equally useful in helping with my confidence that the interpretation and subsequent analysis of each source was satisfactory came via an unanticipated means: the recognition that there were distinct similarities in the descriptions about key concepts, roles or responsibilities among the

sources. This realisation was comforting in that it somewhat confirmed that some of the more bizarre nursing considerations (e.g., how to tie a piece of string onto a leech before attaching it to a haemorrhoid) was not the outcome of mistranslation, but rather was a common recommendation of its time. Such replication between sources also highlighted that many ideas presented as revolutionary medical advice had actually been borrowed from previous books, often without acknowledgement of the original author.

Despite the helpfulness of these experiences in reassuring me the translation protocol was rigorous, there will always be a potential risk that some aspects of these non-English sources were mistranslated as a result of the use of MT, the proficiency of my linguistic skills, and as before, archaic terms being used within the sources. Significantly, this risk should continue to subside in time with the evolving sophistication of MT tools.

8.7 Summary

A critique of the study has been presented in this final chapter. The study used postmodernist historical methods with an interpretive lens to conceptualise nursing theory and praxis prior to the nineteenth-century reforms. The study demonstrates that pre-professionalised nursing theory and praxis was far more complex and scientifically informed than the populist metanarratives that exist within and outside the profession. This conceptualisation identified numerous persistences in theory and praxis, highlighting the need for the profession to be cautious in believing that nursing knowledge and skills are constantly progressing. Through this conceptualisation, the profession has an opportunity to reframe its understanding of the past, and in doing so, resituate its present and redirect its future.

Epilogue

Completing this PhD has changed how I identify as a nurse. I no longer see myself as an academic or my default preference – a clinician. Instead, I now see myself in two evolving roles – that as a nurse researcher and a nurse historian. While I thoroughly enjoyed learning my new craft, a large part of this enjoyment came from studying a topic that was a continuous process of discovery. I never knew what snippet of *oro* (gold) I would find on the page – some data would shock (e.g., sacrificing a puppy for the treatment of head diseases); some would infuriate (e.g., the way in which subservience was viewed by many as an essential quality of the nineteenth-century nurse); some would amuse (in this case, it was a toss-up between the quirky and often dangerous ingredients used in medicinal recipes; how an enema could be used to treat absolutely everything; and how frequently haemorrhoids and helminths were mentioned in the corpus); and some would simply perplex (e.g., How does placing ice on a man's testicles result in haemostasis of a nosebleed?; Why were green curtains acceptable but patterned ones banned?; and, How does one ensure a leech is correctly placed on somebody's haemorrhoid?). But most significantly there were the gob-smacking brilliant pieces of data (e.g., the senior nurses being responsible for updating the patient's notes during doctor's rounds; numbering patient beds so that medication errors were less likely to occur; the anatomical landmarking used to administer seventeenth-century remedies; and of course, Carrère's descriptions of how to perform a pulse assessment). Such (re)discoveries I hope gives others a deeper glimpse into a more inclusive, less Nightingale-centric history of nursing while also encouraging the questioning of what nursing is now and where it will be in the future.

On a final note, spending the last couple of years acquainting myself with the profession's past practices has led to the rediscovery of long-lapsed narratives of my own past. Performing this study has reawakened my love for languages and cultures. Ironically, I unconsciously 'dumped'

these passions in the period where I was studying to become a nurse. Undertaking this PhD has allowed me to do a full circle by enticing [forcing] me to learn elements of archaic Spanish, French, German and Portuguese languages and explore disparate nursing cultures. In doing so, I have become reacquainted with my pre-nurse self.

The long and winding road that leads to your door,

Will never disappear, I've seen that road before

It always leads me here, lead me to your door.

Lennon & McCartney, 1970/2009, track 10

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Appendix A: Search Strategies for Scoping Review

MEDLINE search strategy
(exp Manuscripts as topic/ OR exp Manuscripts, Medical as Topic/ OR exp Rare Books/) AND (exp NURSES/ OR exp Nurse's Role/ OR exp Nursing Staff, Hospital/ OR exp NURSING/)
(exp NURSES/ OR exp Nurse's Role/ OR exp Nursing Staff, Hospital/ OR exp NURSING/) AND exp HISTORY/)
(exp Manuscripts as topic/ OR exp Manuscripts, Medical as Topic/ OR exp Rare Books/) AND exp "History of Medicine"/)
(exp Manuscripts as topic/ OR exp Manuscripts, Medical as Topic/ OR exp Rare Books/) AND exp "History of Nursing"/)
CINAHL search strategy
(MH "Nurses+" OR MH "Nursing Care+") AND (MH "History+")
(MH "Nurses+") AND (MH "Manuscripts" OR MH "Preservation of Materials" OR MH "Book Preservation" or MH "Rare Books")
(MH "Nursing Care+") AND (MH "Manuscripts" OR MH "Preservation of Materials" OR MH "Book Preservation" or MH "Rare Books")
(MM "History of Nursing") AND (MH "Manuscripts" OR MH "Preservation of Materials" OR MH "Book Preservation" or MH "Rare Books")
(MM "History of Medicine") AND (MH "Manuscripts" OR MH "Preservation of Materials" OR MH "Book Preservation" or MH "Rare Books")
JSTOR search strategy
"rare books" AND "nursing"
"history of nursing" AND "rare books"
"history of medicine" AND "rare books"
"nursing" AND "nineteenth century"
"nursing" AND "eighteenth century"
"nursing" AND "seventeenth century"
"nursing" AND "sixteenth century"
:nursing" AND "fifteenth century"
Scopus search strategy
"rare books" AND "nurs*"
"rare books" AND "medicine"
"history of nursing" AND "rare books"
"history of medicine" AND "rare books"
"nursing" AND "nineteenth century"
"nursing" AND "eighteenth century"
"nursing" AND "seventeenth century"
"nursing" AND "sixteenth century"

“nursing” AND “fifteenth century”

Project MUSE search strategy

“history of nursing” AND “rare books”
“history of medicine” AND “rare books”
“nursing” AND “rare books”
“nurses” AND “rare books”
“medicine” AND “rare books”
“nursing” AND “nineteenth century”
“nursing” AND “eighteenth century”
“nursing” AND “seventeenth century”
“nursing” AND “sixteenth century”
“nursing” AND “fifteenth century”

Appendix B: Source Criticism Appraisal Tool

Source title: _____Review date:_____

Dimension	Critique	Comments
Provenance	What kind of source material is it?	
	Who created it?	
	When was it created?	
	Where was it created?	
	How was it created?	
	What does its preservation suggest about its authenticity?	
Purpose	What was the writer's purpose in creating the source?	
	Who was the intended audience?	
	How did the writer's purpose influence the way the source was written or produced?	

Dimension	Critique	Comments
Context	How does the source relate to its temporal, sociocultural, geographic/environmental, political, economic, cultural, religious and professional contexts?	
	How representative is the source of other documents in the field?	
	How representative is the writer of other people in the field?	
Veracity	What do we know about the writer (e.g., personality traits, socio-economic status, cultural background)? Are they credible?	
	How might the writer's purpose in creating the document have introduced bias?	
	What judgements, values and assumptions are evident in the document? Is there evidence of ethnocentrism or stereotyping?	
	How important is it that information in this document is accurate?	
	How does the information within the source support or refute other sources?	

	How does it cohere with information in other sources?	
	Is the source a translation? How might this affect the source?	
	Is the source in its original form or is it a reproduction? How might this affect the interpretation?	
Usefulness	How useful is the document for the research purpose?	
	How does the document offer information not available in other material?	
	Does the source mention other resources that may be useful?	
	Additional comments (e.g., need for specialised tools for analysis)	
	Areas requiring further investigation	
	What is the outcome of the evaluation?	

Adapted from Donnelly, M., & Norton, C. D. (2011). *Doing history*. London, England: Routledge; Mages, K. C., & Fairman, J. (2008). Working with primary sources: An overview. In S. B. Lewenson & E. Krohn Herrmann (Eds.), *Capturing nursing history: A guide to methodological methods in research* (pp. 129–148). New York, NY: Springer Publishing Company; Wall, B. M. (2006). Textual analysis as a method for historians of nursing. *Nursing History Review*, *14*(1), 227–242. doi:10.1891/1062-8061.14.227; Wood, P. (2011). Understanding and evaluating historical sources in nursing history research. *Nursing Praxis in New Zealand*, *27*(1), 25–33.

Appendix C: Risk Management Plan (Created February 2018)

Potential risk	Strategies to address risk
Risk of translation errors and misinterpretation because of language barrier	The English translation of sources will be used wherever possible Development of a translation protocol that incorporates two different forms of MT The research student is learning Spanish and has learnt French in the past Professional translation services are included in budget
Risk of providing an 'incomplete picture' on the history of nursing as a result of limiting the study to Europe, North America and Australia	The eligibility criteria will be applied to ensure the project is achievable It is intended that the study will be expanded to other continents as a postdoctoral project
Risk of inadvertently omitting key data because of ongoing digitisation project	Development of a scoping review protocol Liaison with other historians/librarians to check for potential omissions Visit to archives in Spain (Madrid and Seville) already undertaken
Risk of including inauthentic, fake or questionable primary sources into data analysis	Authenticity of potential sources will be scrutinised using the principles of historical research methods Creation of a source appraisal tool to assist with source criticism Sources will be located from reputable online archives and databases Liaison with key historians and/or archivists to confirm authenticity of source where required
Risk of data being 'lost' during the study	Data management for this study will be in accordance with the James Cook University policy on 'Code for the Responsible Conduct of Research', adapted from the *Australian Code for the Responsible Conduct of Research* Due to the nature of the study, nil raw data which is sensitive in nature will be obtained Only digitised copies of primary sources will be used in this study Data will be stored in three different locations: local network file server storage, on an external hard drive, and, on a cloud-based network. Data will be 'backed up' weekly using SyncBack software

Risk of the research student not meeting candidature milestones	Ongoing, regular meetings with supervisory team will allow for early identification of challenges so that intervention and modifications can occur in a timely manner Structured, achievable timeframes negotiated with supervisory team The research student has taken annual leave and long service leave (January–July 2018) to facilitate study Special studies program (SSP) approved (August 2018 to February 2019) The research student will revert to part-time enrolment in March 2019 Workload negotiated with line manager (e.g., research day allocation)
Risk of inadequate funding for the study	The research student's discretionary budget allocation and student support account will fund this study Additional travel and living cost funding allocated in SSP approval External scholarships will be applied for as deemed appropriate by the supervisory team The research student will supplement any outstanding costs with personal funds

Appendix D: JCU Human Research Ethics Exemption Letter

This administrative form has been removed