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An Exploration of Nurses' use of History Taking and Physical Assessment Skills in Adult Acute Care

By

Pamela Jacqueline Diggens

Thesis for the degree of Doctor of Philosophy

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Amid growing concern for patient safety, the deterioration and mortality of acutely ill patients continue to be problematic and are a high priority of NHS England. Evidence has shown acute care patients are at risk of clinical deterioration when assessment is not comprehensive. Nurses are deemed best placed to identify changes in patients' conditions to detect signs of clinical deterioration because they maintain a constant presence during the shift and get to know their patients. History-taking and physical assessment (HTPA) skills provide nurses with appropriate education and training, giving them the necessary skills to undertake a comprehensive assessment of patients. Yet, to date, few studies have adopted a qualitative approach to explore acute care nurses' use of the skills in the context of the clinical setting.

A hermeneutical-dialectical methodology was adopted to explore the perceptions of participants of factors that influenced nurses' use of HTPA, changes to nursing practice, and the impacts on patient care. The study took place in acute care services across four hospitals. A two-staged qualitative approach consisted of five focus groups of 18 nurses and four focus groups of 15 managers, followed by 13 nurse semi-structured interviews.

Braun and Clarke's thematic analysis revealed that participants perceive nurses' use of HTPA enhanced holistic care, continuity of care, and rapid intervention could improve patient outcomes. However, nurses' ability to exercise these skills was limited by their role. Fundamentally, the ward nurse's role lacked legitimacy and autonomy which constrained nurses from being able to use HTPA to assess acutely ill patients. Additionally, the lack of appropriate mentor support restricted ward nurses from developing their confidence and competence to use the skills in clinical practice. Organisational workforce pressures associated with 'firefighting and gap-filling' due to the combination of excessive workloads and insufficient staffing numbers further impeded acute care nurses from using HTPA.

Highlighting the challenges that acute care nurses currently face in using HTPA skills is pivotal for organisations and the nursing regulator to promote systems to be put in place to support nurses in their development and use of HTPA in clinical practice. Awareness of nurses' challenges in using HTPA is also aimed at those who provide the education and those that support nurses in clinical practice.

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Research Thesis: Declaration of Authorship

Print name:	Pamela Jacqueline Diggens

Title of thesis:	An Exploration of Nurses' use of History Taking and Physical Assessment Skills in Adult Acute Care.

I declare that this thesis and the work presented in it are my own and has been generated by me as the result of my own original research.

I confirm that:

1. This work was done wholly or mainly while in candidature for a research degree at this University;
2. Where any part of this thesis has previously been submitted for a degree or any other qualification at this University or any other institution, this has been clearly stated;
3. Where I have consulted the published work of others, this is always clearly attributed;
4. Where I have quoted from the work of others, the source is always given. With the exceptionof such quotations, this thesis is entirely my own work;
5. I have acknowledged all main sources of help;
6. Where the thesis is based on work done by myself jointly with others, I have made clearexactly what was done by others and what I have contributed myself;

None of this work has been published before submission.

Signature:		Date:	December 26 2022

Abbreviations and Definitions

DH   Department of Health
FG   Focus Group
HTPA   History taking and physical assessment
SSI   Semi structure interview
UKCC   United Kingdom Central Council
WHO   World Health Organisation
NHS   National Health Service

Acute Care Nurse: A qualified nurse involved in providing nursing care/intervention to

                            patients in acute care areas who has attended some type of history

                            taking and physical assessment course.

Acute Care Manager: A qualified health professional with overall responsibility for

                            overseeing patient care on an acute ward/unit. Or a qualified health

                            professional who is a member of the Learning Education and

                            Development team responsible for acute care nurses' development in

                            history taking and physical assessment skills.

History taking: Obtaining subjective information from the patient about aspects of

                            their health.

Inspection: Visual observation of the body in the course of a physical

                            assessment/examination.

Palpation: Physical examination by pressure of the hand or fingers to the surface

                            of a body part especially to determine the condition (as in size or

                            consistency) of an underlying body part or organ.

Percussion: The act or technique of tapping the surface of a body part to learn the

                            condition of the parts beneath by the resultant sound.

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Chapter 1   Introduction and Background

1.1 Introduction to Study

This thesis presents my study exploring nurses' use of history taking and physical assessment (HTPA) skills within acute care settings. This opening chapter begins with my own professional interest in nurses' use of HTPA skills, the impetus behind this study. The chapter continues by distinguishing HTPA skills from basic physical assessment skills taught to nurses during their undergraduate nursing curriculum, before introducing relevant historical content and policies significant in the expansion of history taking and physical assessment skills in the nursing profession, internationally and in the United Kingdom (UK). This is followed by an outline of acute care nursing, focusing on issues pertinent to nurses' recognition of, and response to, clinical deterioration. Current approaches and tools used by acute care nurses to aid their recognition and response to clinical deterioration are also considered. This leads to justification of the potential contribution of this study, ahead of concluding with the aim and research questions for this research. Finally, an overview of each subsequent chapter of this thesis is offered.

1.2 Professional Interest

During the early 1990s, as a junior registered nurse working within a critical care environment, I informally learnt physical assessment skills, such as auscultating a ventilated patients' chest to detect air entry. These skills were above and beyond the fundamental physical assessment skills that were taught as part of pre-registration nursing education in the United Kingdom. Most of my learning of these skills was experiential, with support from senior nursing colleagues and other health care professionals, particularly anaesthetists' and physiotherapists. Whilst experiential learning was conducive in providing me with opportunities to practice certain physical skills, there were gaps in my underpinning knowledge associated with their use. Years later, as an experienced nurse working on an acute care setting, a situation occurred on night duty while I was looking after a patient who required non-mechanical ventilation via their tracheostomy tube as recounted below:

"I realised the patient was displaying symptoms associated with respiratory distress. Assessing them, I picked up a stethoscope and placed it on the patient's chest and listened for breath sounds in several different places – none were audible on one side of their chest. I suspected that the patient had most likely developed a pneumothorax. Increasing the concentration of oxygen being administered and raising nursing support, I decided to by-pass the normal protocol of bleeping the senior house office (SHO). Concerned for the patient's safety, I bleeped the on-

call registrar who ordered me to contact the SHO to review the patient. I refused and verbalised the patient's relevant history, current observations, and my suspicion of a pneumothorax due to absent breath sounds one sided of the chest. Within ten minutes the registrar had arrived, confirmed my suspicion, and inserted a drain into the patient's chest which relieved their symptoms. Afterwards the registrar made a point of thanking me for reporting the absent breath sounds, informing me it was this one piece of information that had caused them to take my concern seriously."

This remains a poignant and memorable experience for me. It was the first time I fully appreciated the benefits of using enhanced physical assessment skills, especially since the outcome for the patient could so easily have been less favourable, as, in such situations, time is of the essence.

In the early 2000s I moved into education full time as a nursing lecturer within the Faculty of Nursing at the University of Southampton. It was here that my interest in nurses' use of history taking and physical assessment (HTPA) skills took a new direction. I joined a small teaching team who were responsible for the inception and delivery of post-qualified history taking and physical assessment modules. Modules were targeted towards registered health care professionals, predominantly nurses. Initially the modules were taught at diploma and degree level, then from 2007 at degree and master's level. At its maximum capacity, both modules (degree and master's) combined have just over 160 registrants enrolled throughout the year with several cohorts each semester. Over the past 16 years, teaching HTPA skills has been a key aspect of my academic role, and for the last eight of these years I have been privileged to lead the degree level module.

Nurses from various organisations, across diverse clinical settings and with an array of roles and job titles, have attended our taught module over many years. Reflecting on how many nurses have attended the HTPA modules during these past years has made me curious about how nurses might be using history taking and physical assessment skills in their day-to-day work as part of their nursing practice. Having worked in acute care areas I was interested to find out more about how acute care nurses, with HTPA skills, might be applying these skills in their clinical setting, especially as growing evidence continues to surround patient safety concerns regarding nurses' ability to recognise and respond to clinical deterioration.

1.3 History Taking and Physical Assessment (HTPA) Skills

Nurses are accustomed to performing basic physical assessment skills consisting of physiological observations and the general 'appearance' of patients. Physiological observations consist of a

minimum set of six physiological measurements; systolic blood pressure, level of consciousness, oxygen saturation, temperature, respiration and pulse rate (National Institute for Health and Care Excellence (NICE), 2007; NICE, 2020). Interestingly, the NICE (2020) guidance does not make explicit reference to general observations that involve assessing the general 'appearance' of the patient. However, it is most likely implied as, to assess a patient's level of consciousness, a nurse must look at, speak to, and touch the patient.

In contrast, history taking and physical assessment (HTPA) are terms generally associated with specific skills enabling nurses to systematically gather information from patients by taking some type of history followed by performing a physical assessment based on the use of four key skills; inspection, palpation, percussion and auscultation (Bickley et al., 2016; Jarvis et al., 2018). Together, HTPA encompasses the gathering of subjective and objective information from the patient about their health status.

Subjective information gathered during the history taking provides the patient with the opportunity to express in their own words how they might be feeling, or what their concerns might be in relation to aspects of their health and well-being. The type of history that is taken depends on the purpose and situation for gathering information. For example, a comprehensive history requires adetailed and thorough consultation, gathering a full range of information about an individual's health and thus takes longer to complete. On the other hand, a focused history is more relevant when the patient has a specific health problem or issue that necessitates gathering information to target a specific area, thus taking less time to complete.

Ideally the history (subjective data) is gathered first to direct nurses in their physical assessment (objective data) of patients. Objective data enables measurable information to be gathered during a physical assessment and requires nurses to use any or all four key skills e.g. inspect chest for symmetrical expansion, palpate precordium for cardiac murmurs, percuss the abdomen for dullness and auscultate lungs for crackles. Within the context of this study, HTPA are seen as physical skills that registered nurses can use to gather both subjective and objective information that builds upon their more basic undergraduate physical assessments skills. For this reason, and where necessary to aid clarity throughout the thesis, the term 'basic' will be included to differentiate between the two types of physical assessment skills.

1.4 Emergence of HTPA into the Nursing Profession

History taking and physical assessment were once skills that resided solely within the remit of a doctor's role. The combination of doctor shortages and greater demands on health care services advocated the use of HTPA skills within the wider nursing profession, first internationally and later in the UK. During the 1960s, the implementation of Nurse Practitioner (NP) programmes in the United States of America (USA) saw the formal introduction of teaching HTPA to registered nurses who expanded upon their traditional nursing roles and responsibilities. As the NP roles gathered momentum to provide primary health care needs to families across rural communities, Clinical Nurse Specialist (CNS) roles in hospitals were being developed for nurses to oversee the care and management of a range of health care problems of hospital patients (Reaby, 1991; Page and Arena, 1994). Concurrent with the USA, similar events occurred in Canada. Australia implemented HTPA courses in the 1980s, allowing nurses to also be taught as part of post qualifying education (James and Reaby, 1987). This was followed shortly after by other countries, including New Zealand and Japan. All these countries gradually assimilated the teaching of HTPA skills into student nurses' undergraduate curricula.

The introduction of HTPA education in the United Kingdom's (UK) nursing profession happened much later, in the 1990s. UK governmental mandates (National Health Service Management Executive (NHSME), 1991; Department of Health (DH) 1993) aimed at initiating a reduction in junior doctors working hours, created a shortfall of doctors' availability in hospital environments, especially at weekends and overnight. To counteract this shortfall, nurses were seen as ideal substitutes and it was assumed they could ameliorate this shortage by taking on additional tasks usuallyperformed by doctors. Professional and governmental organisations encouraged and influenced nurses to expand upon their more traditional nursing roles and practice to improve the efficiencyand quality of care services (United Kingdom Central Council (UKCC), 1992; DH, 1997, 1999, 2000a, 2004). The UKCC's Scope of Professional Practice (1992) was pivotal in advocating nurses' autonomous decision making regarding the scope and boundaries of their practice, providing they had undertaken adequate training for the relevant task.

These changes in the nursing profession have led to the development of various diverse 'expanded' nursing roles and nurse-led services necessitating HTPA skills, such as critical care outreach and pre-operative care (DH, 1999; Rushforth et al., 1998). Alongside this, the emergence of research examining HTPA across a range of nursing roles included pre-operative assessment and critical care, in conjunction with other nursing attributes, such as clinical decision making

(Rushforth et al., 2000; Kinley et al., 2002, Coombs and Morse, 2002) and diagnostic reasoning (Lee et al., 2019).

Studies focusing on HTPA have revealed that nurses perceive various factors to be influential that have enhanced and inhibited their use of physical assessment skills in the clinical setting; this is discussed further in chapter 2 (Reaby, 1991; Colwell and Smith, 1985; Brown et al., 1987; Edmunds et al., 2010; McElhinney, 2010; Aldridge-Bent, 2011; Birks et al., 2013; Osborne et al., 2015). Overall, these findings have determined that, despite nurses being taught HTPA, many skills are underused.

Most of the studies exploring factors that influence nurses' use of skills have focused on evaluating the effectiveness of an HTPA course (Reaby, 1991; Colwell and Smith, 1985; Brown et al.,1987; Edmunds et al., 2010; McElhinney, 2010; Aldridge-Bent, 2011). Therefore, studies have involved factors influencing nurses' immediate learning of HTPA skills from the classroom environment to the clinical practice setting. Arguably, factors influencing nurses' initial use of these skills in clinical practice may change over longer periods of time, meaning that factors which might enable nurses to develop and maintain these skills possibly differ from factors in the transference of skills. Nevertheless, evidence of this is very limited and further exploration surrounding factors that influence nurses' use of HTPA skills in acute care areas may offer insights for educationalists and health care providers. This is of particular relevance for individuals, such as managers or those responsible for purchasing educational courses.

Unlike other countries, such as the USA, Canada and Australia, until recently the UK had refrained from incorporating HTPA skills into students' undergraduate nursing curricula. Currently, in the UK, there appear to be three subgroups of nurses now taught HTPA education:

Subgroup 1: HTPA skills, initially only taught to nurses in advanced nursing roles, are most firmly embedded as part of advanced nursing roles. HTPA skills are only one set of many skills that nurses in advanced nursing roles require e.g. diagnostics. As a result, research has focused on advanced nursing roles which implies nurses' use of HTPA skills. Few studies (McElhinney, 2010; Aldridge-Bent, 2011; Raleigh and Allan, 2016) have explicitly explored nurses' use of HTPA skills. Although it is not the intention of this thesis to focus on advanced roles the value of including advanced nurse practitioners (ANPs) is that this research explicitly focuses on their use of HTPA. Additionally, nurses in these advanced roles offer a lens through which to examine the contrasting position of the ward based nurses.

Subgroup 2:   Nurses complete HTPA education as part of their professional continuing practice development (CPD). Anecdotal experience from my educational role reveals that nurses have commented that the main reason for attending HTPA education is to improve upon their basic physical assessment skills as patients are becoming more acutely ill. Although the evidence surrounding nurses' use of skills is addressed in chapter 2, evidence indicates that many skills are underutilised and nurses report relying predominantly on basic physical assessment skills. This is of particular interest to this study as, despite HTPA skills being a recent addition in student nurses' undergraduate curricula, there is ongoing demand for these skills in Post Qualifying (PQ) and Post Graduate Training (PGT) as it will be several years before all nurses have been taught these skills as undergraduates. Many countries have then extended the teaching of HTPA to other qualified practitioners, especially registered nurses, in non-advanced/specialist roles. So, skills taught at postgraduate or post qualifying modules are part of continuing professional practice (CPD) as opposed to ANP programmes. Teaching at this level is widespread, particularly in acute care, yet we know very little about the extent or nature of their use of skills.

Subgroup 3:   Unlike countries, such as the USA and Australia, where HTPA have been firmly entrenched for over 45 years and, despite the recent introduction of HTPA skills in UK undergraduate nursing curriculum, as yet little research has been undertaken on the impact of the inclusion of HTPA skills in the UK undergraduate curriculum. it is still too new to be amenable to research. Since countries like Australia appear to have been less unsuccessful in embedding skills in pre-reg training, there is value in undertaking this study which could, however, produce findings which are transferable to those newly supporting undergraduate nurses to learn and practice HTPA skills. This is particularly so, as evidence indicates that nurses taught these higher-level skills as part of their pre-registered training use few, if any, compared to basic physical assessment skills as addressed in Chapter 2.

1.4.1 Nurses Scope of Professional Practice

Within the context of this thesis, the relationship between HTPA and nurses' scope of professional practice is important to clarify in terms of 'advanced' and 'extended' practice. Currently NHS England (2017) offers a definition of advanced clinical practice as being:

… delivered by experienced, registered health and care practitioners. It is a level of practice characterised by a high degree of autonomy and complex decision making. This is underpinned by a master's level award or equivalent that encompasses the four pillars of clinical practice, leadership and management, education and research,with demonstration of core capabilities and area specific clinical competence.

(NHS England Multi-professional Framework for Advanced Clinical Practice in England, 2017: 8).

Nurses who work at an advanced level of practice assess, diagnose, and treat patients. To do so, nurses working at this level are recommended to develop skills and knowledge in key areas, predominantly history taking, physical assessment, diagnosis, and decision-making (Royal College of Nursing (RCN), 2012). Nurses working at an advanced level of practice need HTPA skills to independently make diagnostic decisions and inform therapeutic interventions. HTPA are initial steps in the diagnostic process and therefore fundamental to making a medical diagnosis, thus determining which condition, disease or illness might best explain a patient's presenting signs and symptoms. Additional skills in relation to understanding the underpinning diagnostic decision making theory related to hypothetico-deductive reasoning, type 1 vs type 2 thinking, avoiding risks of bias etc. (Sox et al., 2013) form the latter steps of the diagnostic process relevant for advanced practice. Significantly, HTPA skills are not of themselves 'advanced practice' nor are they exclusive to nurses working at an advanced level of practice. Notably, HTPA skills are valuable for nurses working in extended practice roles.

Extended practice is a level of practice below advanced practice and refers to a task usually undertaken by a profession e.g. doctors use of HTPA, which can be delegated to another profession, such as nurses, providing they have received the appropriate training (Davis, 1992). Since tasks are delegated, this implies that extended practice roles have less autonomy and less independence compared to advanced practice. Extended practice might also occur via experiential learning rather than as part of a formal post educational qualification and master's level is not necessarily required (nhsemployers.org, 2022). It is important to note that, more recently, an alternative term, namely 'enhanced' practice, has started to emerge for extended practice. This may well become more widely adopted by the nursing profession in the future (NHS Health Education England, 2022). However, for the purpose of this thesis, the term extended practice will continue to be used.

In extended roles, HTPA can be applied in the context of a regular registered nursing role, such as

a staff nurse or charge nurse/sister to augment their patient assessment, particularly in acute care areas where patients are at increased risk of deterioration. Instead of HTPA skills being used to aid a medical diagnosis, using HTPA skills as part of extended practice helps nurses determine normal versus abnormal findings, enabling them to make credible referrals to escalate concerns to appropriate senior colleagues (Baid, 2006). Additionally, HTPA skills could assist nurses in making what is sometimes referred to as a nursing diagnosis which is a process that enables nurses to make decisions surrounding patients' nursing care requirements related to their more traditional nursing role (Secrest et al., 2005; NANDA International, 2022). The concept of a nursing diagnosis is more inherent within the United States as part of teaching HTPA to undergraduates. Undergraduates in the UK instead are taught the nursing process which relates to the effective planning of patients' personalised care needs (Glasper, 2020) and which reduces the risk of confusing a nursing diagnosis with a medical diagnosis. However, since nurses could apply their use of HTPA in different ways to inform diagnosis, depending on whether they are working in advanced or extended roles, to reflect these differences, the broader term of 'diagnosis' will be referred to here on. Hence more research on nurses' comprehension of how HTPA skills can be applied in their nursing practice should provide new insights and build upon prior evidence.

In reality it is most likely that many 'advanced' nursing roles, such as NPs, sit at varying interfaces between the level of an ANP and that of a registered nurse. Given that there is considerable confusion surrounding roles, to aid clarity throughout this thesis the collective term 'nurses' will refer to registered nurses, irrespective of role, whilst the term 'nurse practitioner (NP)' will denote CNS, NP and ANP (or equivalent) roles, leaving the term 'ward nurse' to refer to nurses not working in advanced nursing roles. Where further distinction might be necessary to offer greater insight i.e. in the findings chapter, nurses' individual specific roles will be acknowledged providing that participants' anonymity can be maintained.

1.5 Acute Care

Acute care is an overarching term that encompasses a diverse range of services that patients can access, either as inpatients or outpatients, depending on their health care needs. Acute care provides care to patients requiring active, short-term care for various medical and non-medical conditions (The Health Foundation; 2017; Standard of Care, 2019). Given this, acute care compared to criticaland rehabilitation care, is probably the largest provision of health care services in hospitals. Between September 2013 and June 2016, the Care Quality Commission (CQC) programme of comprehensive hospital inspections across the UK identified 136 NHS acute

non-specialist trusts and 17 specialist trusts. Between these trusts, hospitals have provided and delivered a total of 1,804 core services across 265 non-specialist and 27 specialist hospitals (CQC, 2016). The acute care bed availability across the UK between January and March 2020 was 102,194 of which 90,309 of these beds were occupied (National Health Service (NHS) England, 2020). The United Kingdom (UK) has an estimated population of 66,796,807 and projects an estimated growth in the population by 2028 of 69.4 million people (Office for National Statistics, 2020). This means demands on hospital acute care services are also expected to continue to rise (CQC, 2016).

The UKs government report, Comprehensive Critical Care (DH, 2000b), was pivotal in its review of the provision of adult critical services after increased demands on critical care beds exceeded capacity. With insufficient critical care beds to care for critically ill patients, the report made recommendations placing the patient at the centre of care. This emphasised that a lack of beds in designated critical care areas e.g. intensive and high dependency care, would not be detrimental to the care that patients should receive beyond the physical boundaries of critical care settings e.g. acute care wards. Hence the phrase 'critical care without walls' was used to typify this future vision of critical care provision. In reality the concept of critical care without walls, although revolutionary, most likely placed increased pressure on acute care services. As an outcome of this report many acutely ill patients are now nursed on acute care wards.

The Comprehensive Critical Care (DH, 2000b) report devised a classification of patients' level of care aligning to the care needs of patients according to their severity of illness. Table 1 below shows the descriptors for each level of care and key to note is level 1, acutely ill patients, who are identified as being 'at risk' of clinical deterioration. This is worrying given that the classification of patients' level of care continues to be used since its inception 20 years ago, suggesting that very little has changed.

Table 1: Level 1 Classification of Patients Level of Care

Level of Care	Descriptor of Patients Requirements
Level 0	Patients whose needs can be met through normal ward care in an acutehospital.
Level 1	**Patients at risk of their condition deteriorating, or those recently relocate from higher levels of care, whose needs can be met on an acute ward with additional advice and support from the critical care team**
Level 2	Patients requiring more detailed observation or intervention including support for a single failing organ system or post-operative care and those'stepping down' from higher levels of care
Level 3	Patients requiring advanced respiratory support alone or basic respiratorysupport together with support of at least two organ systems. This level includes all complex patients requiring support for multi-organ failure.

Patients admitted into hospital should expect to feel safe (National Institute for Clinical Excellence (NICE), 2020), yet there is evidence that indicates otherwise (Silber et al., 1992; McQuillan et al., 1998; McGloin et al., 1999; Hogan et al., 2012; NHS Improvement, 2016). Terms such as 'failure to rescue' (Silber et al., 1992) and 'suboptimal care' (McQuillan et al., 1998) now seem to be familiar phrases attributed to the lack of recognition and response to clinical deterioration. Suboptimal care of acutely ill patients is not only a concern in the UK but has also been identified as an international problem (World Health Organization (WHO), 2021). Thus, the findings of this study should be of interest to others in countries outside the UK.

Nonetheless, it has long been acknowledged that ward nurses caring for acutely ill patients lack the necessary skills to care for acutely ill patients (DH, 1999; 2000b; 2008). Those patients at risk ofdeterioration often receive suboptimal care on ward settings, particularly when assessment is notcomprehensive (McQuillan et al., 1998; National Confidential Enquiry into Patient Outcome and Death (NCEPOD), 2005; West, 2006). The Comprehensive Critical Care (2000b) report made only one key recommendation, specifically aimed at ward nurses, that they should be upskilled. The report set an ambitious goal for 50% of ward nurses to achieve high dependency education/training by March 2002 and 100% by March 2004, over a five-year period. Although far reaching this goal was unrealistic for five main reasons:

1: Many ward nurses choose to work on acute care settings as opposed to critical care because the severity of patients' illness is vastly different e.g. patients are awake and not sedated.

2: The provision of doctor support is not continuous or as readily available to support ward nurses in acute care wards.

3: Acute care wards are less heavily reliant on technology that provides continuous, invasive

monitoring used in critical care settings.

4: Acute care has higher patient to nurse ratios and a different clinical environment.

5: High dependency education is less likely to be relevant to ward nurses as the equipment and monitoring used in high dependency settings is unlikely to be available on acute care wards e.g. blood gas machine, central and arterial monitoring equipment.

Due to ongoing concerns continuing to surround patients' safety, arguably ward nurses still lack adequate training and support in recognising and responding to clinical deterioration. Hence more exploration on nurses' use of HTPA skills within acute care settings is ofbenefit, given UK teaching of HTPA to nurses has been widespread.

1.6 Nursing in Acute Care

Nurses are the largest health care profession in the NHS. A national shortfall of nurses continues to be a challenging problem in the recruitment and retention of nurses, as there is now a shortage of nurses in the workforce. This is worsened by the number of European Union (EU) national nurses leaving the NHS due to the UKs exit from the EU, which has risen from 8.8% to 12.8% over the past two years (Institute for Government, 2019; NHS, 2019a). Furthermore, the ongoing and evolving Covid-19 crisis, is undoubtedly compounding pressure across the health care provision, including acute care.

Nurses work in large, complex, and busy care systems delivering nursing care. Factors including heavy workloads, cultural behaviour and workforce pressures can influence the likelihood of human error (NHS, 2019a). Inadequate numbers of nursing staff may cause nurses to experience stress. Over 63% of hospital nurses report more work-related stress and feeling under too much pressure, preventing them from providing the level of care as they would like (Institute for Government, 2019).

Increased nursing workload can adversely impact on patient safety and has been related to suboptimal patient care. Factors implicated as increasing nurses' workload include interruptions by doctors and relatives, attending to competing care needs of a group of patients, inadequate staffing, inadequate skill mix, increased use of technology and increased patient acuity. Patient acuity is associated with people living longer with more underlying chronic conditions and/or multiple co-morbidities (National Patient Safety Agency (NPSA), 2007; Institute for Government, 2019).

Documentation and effective communication in patients' notes have been seen as important to prevent suboptimal care. An accurate history directs clinicians as to what to focus on (Lichstein, 1990), yet few studies (Brown et al., 1987; de Oliveira., 2016) have investigated nurses' use of using history taking and physical assessment skills together; this is discussed further in Chapter 2. A key finding from a UK national study of patients receiving cardiopulmonary resuscitation following an 'in hospital' cardiac arrest reported inadequate history taking in 70 of the 489 cases (NCEPOD, 2012). The NCEPOD recommended that improvements in patient clerking were required. The profession involved and contributory factors for these inadequacies were not detailed, although the use of the word 'clerking' suggests it might have been doctors. Nonetheless, it highlights the important of taking a patient's history as an integral part of patient assessment and highlights a gap in the literature that this study aimed to explore.

From 576 death reported during 2005-2006, 64 were attributed to clinical deterioration/not recognised/or not acted upon (National Patient Safety Agency (NPSA) (2007)). Nurses' ability to recognize and respond to clinical deterioration is a global problem (Massey et al., 2017) and should be the responsibility of all health care professionals. However, unlike allied health care professionals and doctors, ward nurses maintain a constant presence on the ward by changing shifts throughout the 24-hour period. This makes nurses uniquely placed to recognise and assess deterioration in patients' conditions (Higginson and Jones, 2009) with HTPA skills. Therefore, understanding more about the context in which nurses use HTPA skills might offerinsights for nurses, or those supporting nurses, working in acute care.

Being able to perform comprehensive assessment key feature of nurses' professional practice (Nursing and Midwifery Council (NMC), 2018), yet poorly structured assessment by nurses contributes to signs of clinical deterioration being omitted (NCEPOD 2005). Contributing factors for this include clinical stafffailing to recognise clinical deterioration of patients' conditions, inadequate response to reoccurring problems, lack of appropriate treatment, delay in seeking advice and inadequate assessment (McQuillan et al., 1998; DH, 2008).

NHS improvement (2016) recognises that timely recognition and response to clinical deterioration is complex and multifaceted. This suggests that more than one solution might be required to tackle problems linked to clinical deterioration, patient death and severe harm. NHS improvement recommends that training must target our understanding of processes of deterioration and ability to use clinical acumen. HTPA can provide nurses with underlying relevant pathophysiology, thus

aiding understanding of deterioration. Greater flexibility in the workforce, and more use of creatively has been suggested to support future demand and delivery of acute care provision (Institute for Government, 2019). So, it is probable that nurses with HTPA skills in some guise could assist in the future provision of acute care services. Now is timely to know more about how nurses use HTPA skills in acute care settings.

1.7 Task Substitution

Task substitution is described as the transfer of tasks, or roles performed by one professional e.g. doctor to another professional e.g. nurse (Maier, 2018), and suggests such tasks or roles are permanent as opposed to delegation which may be transient. Task substitution in healthcare settings, such as acute care, can occur in two ways, vertically and horizontally. Vertical substitution refers to the adoption of tasks e.g. HTPA from a profession deemed superior e.g. doctors to a lower profession considered to have a level of training, expertise, power, and autonomy that is not equivalent e.g. nurses. Horizontal substitution occurs when a profession is considered to have a similar level of expertise, training, power, and autonomy as another profession e.g. nurses taking on part of another profession's traditional role e.g. physiotherapists (Nancarrow and Borthwick, 2005; King et al., 2015). The expansion of an individual's boundary is seen to occur with both types of task substitution although the degree of expansion of one's boundary will vary according to the type of task substitution e.g. vertical (higher degree) or horizontal (lower degree) (King et al., 2015).

Task substitution, more recently coined as task shifting to indicate that the responsibility of conducting a task has been shifted (Karimi-Shahanjarini et al., 2019), is not a new concept in the healthcare profession. Task substitution is long-standing in the NHS as evidenced by tasks formerly performed by doctors now being undertaken by nurses in hospital settings, especially nurse-led services, such as perioperative assessment clinics, emergency or trauma care, and rapid response teams (Butler et al., 2020). Individuals taking on new tasks must have the skills and expertise necessary to perform the desired tasks or be required to undertake adequate training/education to acquire the necessary skills and knowledge (European Commission, 2019), inferring that individuals are willing to accept additional responsibilities associated with performing new tasks. When individuals are informed and understand the reasons for task shifting, it is seen to increase their willingness to take on others' tasks.

There are several benefits to task shifting such as assisting the shortage of staff and reducing the

workload of doctors (Karimi-Shahanjarini et al., 2019), as well as strengthening and expanding the workforce by allowing for more efficient use of resources throughout healthcare teams (World Health Organisation (WHO), 2008). Further benefits of task shifting are associated with improved patient experience (WHO, 2008) and possibly better quality and continuity of patient care (Butler et al., 2020). These benefits are seen to increase the satisfaction of healthcare professionals, and transform the delivery of healthcare (WHO, 2008; Centers for Disease Control and Prevention, 2020). Task shifting can cultivate positive attitudes to interprofessional collaboration among healthcare professionals (European Commission, 2019), potentially fostering positive working environments. Task shifting also provides increased opportunities to upskill the workforce which is seen to offer nurses alternative career developments and aid the retention of nurses (Feiring and Lie, 2018), yet to do so nurses must shift more of their tasks to others e.g. health care support workers (HCSWs), otherwise their workloads will increase.

Despite the benefits of task shifting, there are potential risks for both doctors and nurses. Nurses might be concerned about the loss of their professional identity and the shifting of nursing tasks to others e.g. HCSWs, which could remove those nurses wanting to be 'closer' to patients. Equally, for doctors, the shifting of tasks/roles might shrink their roles or be perceived as the encroachment of others e.g. nurses. When healthcare professionals' former roles are modified due to task shifting and substitution it means that what an individual healthcare professional originally signed up to undertake may have changed dramatically (Feiring and Lie, 2018). In vertical substitution, frustration can occur from delegating the 'dirty work' to less superior healthcare professionals (Hugman, 1991). Lack of clarity of one's role is thought to be associated more with horizontal substitution due to both professions having equal power and autonomy (Nancarrow and Borthwick, 2005) compared to vertical substitution which changes an individual's role and challenges traditional hierarchies and professional norms within the healthcare system. There may be many barriers and resistance to task shifting, including unsupportive and unbending attitudes, and regulatory, legislative, and financial constraints (European Commission, 2019).

Not all healthcare professionals appear willing to accept task shifting, and those professionals involved in task shifting need to be accepting of it for it to work effectively. For these reasons task shifting is advised only when the outcomes of implementing it are as good as or better than before and enhance patient care (European Commission, 2019). With the impact of Covid-19, continuing pressures and the current staffing crisis in the NHS, task shifting or substitution appears to be a positive approach if used effectively.

1.8 Approaches and Tools

Several approaches and tools are widely used across acute care services. The National Early Warning System (NEWS) 2 is a mandated standardised tool to detect and respond to clinical deterioration in adult patients (Royal College of Physicians (RCP), 2017). MEWS2 uses an aggregate scoring system linked tophysiological observation, mentioned earlier. Each time a nurse undertakes a patient's physiological observations, scores are collated and recorded, and this gives guidance for nurses regarding escalation concerns, based on the score obtained. Implementing MEWS alone has not resolved factors surrounding patients' deterioration, mainly because these systems are not guaranteed to be fail safe. They also depend on nurses taking and recording patients' physiological measurements, thus aiding detection in deteriorating changes that need to be acted upon (Gao et al., 2007). Across four NHS acute trust, it was found that 83% of nurses failed to undertake observations, 82% failed to escalate a 'triggering' MEWS score, and 73% failed to record observations accurately. Failure to recognise or respond to deterioration was related to 73 incidents on ward settings, resulting in patient death or severe harm (NHS Improvement, 2016). Furthermore, evidence indicates that nurses perceive that taking patients' physiological observations is task orientated (Wheatley, 2006) and inadequate in identifying patient problems (Watson, 2006; Douglas et al., 2015).

Within acute care settings Airway, Breathing, Circulation, Disability, Environment (ABCDE) (Resuscitation Council, 2021) is a structured approach that aids assessment. One of the benefits of this structured approach is that it incorporates 'look, listen [and] feel', thereby encouraging nurses to observe and touch patients to gather more information as part of this assessment approach. However, a main drawback of this approach is that it is aimed at recognising life-threatening conditions i.e. cardiopulmonary arrest situations. As a result nurses might not necessarily implement this structure as part of their practice to help assist in the detection of earlier signs of clinical deterioration. A much more measured and in-depth use of ABCDE which incorporates cardiopulmonary HTPA could, if appropriately undertaken, make a real difference.

Critical Care Outreach Teams (CCOT) emerged following recommendations from the Comprehensive Critical Care (DH, 2000b) report to provide support to acute care ward nurses caring foracutely ill patients. CCOTs are the equivalent of the USAs Rapid Response Teams (RRTs) and Australia's Medical Emergency Teams (METs), and distinct from their international counterparts inbeing completely nurse-led (NICE, 2018). Notably, nurses in CCOT are reliant on HTPA skills to gather more information during the assessment of a patient's condition (Coombs and Moorse, 2002), indicating that these skills may have real benefit in acute care areas.

Acute care areas, in contrast to intensive and critical care areas, have less invasive and constant monitoring of patients which is recognised as assisting with detecting patients who might be experiencing problems or developing complications. Early identification can lead to more prompt and timely management of patients' conditions. Early identification can prevent patient admission to critical care settings, decrease patients' length of hospital stay and reduce costs associated with more intensive care, as well as improving survival. However, the degree of monitoring equivalent to high acuity settings does not occur as it is not deemed common practice, mainly due to costs and lack staff with expertise to care for patients using more invasive techniques. Usually, patient assessment in acute care areas predominantly focuses on basic physical assessment, consisting of temperature, pulse rate, respiratory rate, blood pressure, and oxygen saturations (Vincent et al., 2018).

Despite consensus that patient monitoring must be improved to aid detection of patient deterioration sooner, there is disagreement on what monitoring, or assessment is required. On the one hand, there is a strong push for more technology and continuous monitoring of vital signs (Subbe et al., 2017; Vincent et al., 2018), whilst on the other a desire for nurses to act as 'monitors' by assessing patients using enhanced physical assessment skills (Birks et al., 2013; Douglas et al., 2015). Arguably, nurses are best placed to monitor and detect subtle changes in patients' conditions, surpassing any limitations with technology; even though a digital thermometer can determine a patient's temperature, it cannot assess if a patient's skin is cold, sweaty, or clammy.

1.9 Rationale for Research

Since the late 1990s the UKs National Health Service has invested considerable costs in financing nurses' education and in training courses like HTPA (Imison et al., 2009; NHS Information Centre, 2013). With forthcoming changes to the purchasing and provision of qualified nurse education and training, including substantial budgetary cuts, it is timely to explore nurses' use of HTPA skills to offer insight for individuals purchasing or considering undertaking taught HTPA courses/training.

Nurses merely performing basic physical assessment and recording physiological observations is no longer adequate to identify patient problems (Watson, 2006; Subbe et al., 2017) and more detailed information needs to be gathered. This is particularly since the deterioration and mortality of acutely ill patients continues to be problematic (RCP, 2012; Francis, 2013; Keogh, 2013; RCP, 2017)and is a key feature concerning patient safety in the NHS England 'Putting

Patients First' business plan (2014a). HTPA skills provide nurses with appropriate education and training, giving them the necessary skills to enhance their basic assessment skills, yet to date few studies have explored nurses' use in the context of the clinical setting.

Evidence indicates that acutely ill patients', or those at risk of deterioration, often receive suboptimal care on general ward settings, particularly when patients' assessment is not comprehensive. Factors contributing to patients' risk of deterioration include staff failing to recognise clinical deterioration in the patients' conditions, lack of appropriate treatment, delay in seeking advice and inadequate assessment (McQuillan et al., 1998; DH, 2000b; DH, 2008; NCEPOD, 2012). Despite the implementation of track and trigger systems, such as Early Warning Systems (EWS) and National Early Warning Systems (NEWS2), to improve patient outcomes (RCP, 2012; RCP, 2017) and aid recognition of patient deterioration, evidence regarding their effectiveness towards positive patient outcomes is inconsistent. It has been well established that general ward nurses need to develop their skills in order to adequately care for acutely ill patients (DH, 1999; DH, 2000b); a central concept in the new NHS England's agenda is aimed at supporting healthcare providers ensuring that the right staff, with the right skills, are in the right place at the right timeto safeguard delivery of quality care to patients (National Quality Board, 2016; NHS Long Term Plan, 2019b).

Although there have been studies on the nursing contribution to patient care (Spilsbury et al., 2001) there appears to be limited research relating exclusively to nurses' use of HTPA. HTPA skills can enhance nurses' ability to gather a variety of information to aid in the detection, recognition, and assessment of subtle changes in a patient's condition (Odell, 2009; Jarvis, 2018), such as acutely ill patients. Further information regarding nurses' use of HTPA skills andthe impact on patient outcomes within the UK would be desirable in enabling organisations to consider benefits and drawbacks of training nurses in these skills.

1.10 Summary

Surprisingly limited evidence surrounding nurses' use of these skills in acute care has emerged from the UK (Coombes and Moorse, 2002; Kinley et al., 2002; Cox et al., 2006; Duff et al., 2007; Edmunds et al., 2010; McElhinney, 2010; Aldridge-Bent, 2011), indicating that more research is required. Throughout the past 15 years the NHS has financially supported the HTPA training and education of a considerable number of nurses working across a variety of care settings in the UK. With the recent introduction of HTPA in the nursing undergraduate curricula there is a greater need for those individuals purchasing HTPA course to consider factors that both enhance and

hinder nurses' use of HTPA skills. Nurses from various countries have identified numerous factors acting as barriers that influence nurses' use of skills, and few studies and little up to date research have attempted to contextualise the reasons for these barriers. As a result, it seems nurses might be implementing HTPA skills selectively with many skills underused. Evidence has demonstrated that nurses in advanced roles are safely and effectively incorporating HTPA skills into their nursing practice and improve the quality of care delivered to patients. Still there is a deficiency of evidence concerning UK nurses' use of HTPA skills within acute care settings. With the growing and continual concern that acutely ill patients remain 'at risk' due to failure in recognising signs of clinical deterioration, there has been an increased drive to make significant changes to the UKs current provision of acute care. Consequently, there is considerable benefit in now exploring more about the effective use of HTPA skills by nurses working in acute care and how this might impact on patients' care.

1.11 Aim and Research Questions

The aim of this study is to understand more about nurses' experiences and perceptions of using history taking and physical assessment skills in adult acute care settings. Furthermore, it is expected that this study will advance knowledge and understanding about nurses' use of the skills in acute areas in order to provide a better understanding of what nurses need to develop, to implement and how to maintain the use of these skills in practice. Findings from this study will offer relevant insights for managers and nurses to consider prior to, during and after undertaking any educational/training module on HTPA skills. Findings should also provide those educationalists responsible for teaching these skills to nurses with alternative ideas to the current teaching methods, regarding the design and delivery of taught skills which might aid nurses to develop their use of HTPA skills in their own clinical practice.

The study's three research questions are:

Q1.   How do nurses and their managers perceive nurses' use of history taking and physical assessment impacts on patient care?

Q2.   How do nurses and their managers perceive nurses' use of history taking and physical assessment skills has changed their nursing practice?

Q3.   What do nurses and their managers view as influential factors that aid or hinder nurses' use of history taking and physical assessment techniques in clinical practice settings?

1.12 Thesis Structure

The successive five chapters of this thesis aim to guide the reader through the journey of this study, starting with the literature review in the next chapter. The literature review provides detail about the search strategy and focuses on nurses' use of HTPA skills relevant to aid identification of gaps within the existing literature that enabled the research aim and questions to be developed.

Chapter 3 describes and justifies the selection of a social constructivism research paradigm that informed the methodology of a hermeneutical-dialectical approach and methods of focus groups and interviews to explore nurses' use of HTPA skills within adult acute care settings.

Chapter 4 presents the detailed findings gathered from all the participants, nurses, and managers, within the study and reveals their perceptions and experiences of nurses' use of HTPA in acute care settings. The findings are presented within themes and subthemes developed using Braun and Clarke's approach to the thematic analysis of data.

Chapter 5 draws on key findings to provide detailed discussion of significant concepts using evidence from the wider literature to address this study's research questions to illuminate new information to share or offer insights to advance the body of existing literature of nurses' use of HTPA skills in the clinical setting.

Chapter 6 articulates a number of conclusions drawn from the discussion chapter by addressing the limitations and strengths of this study. In addition it considers the implications for future practice, educationalists, and further areas of research, before a final concluding summary.

Chapter 2   Literature Review

2.1 Introduction

The purpose of this literature review was to explore existing literature of nurses' use of history taking and physical assessment using a systematic approach in order to:

- Reveal prior knowledge concerning nurses' use of history taking and physical assessment skills.
- Explore previous studies and methodological approaches.
- Identify gaps in existing knowledge to guide and inform the research question.

The evidence gathered from this literature review was analysed and synthesised so findings could be presented in this chapter, contributing to decisions that shaped and informed the design and methodology of my study (Parahoo, 2014; Gerrish and Lathlean, 2015).

2.2 Search Strategy

To ensure pertinent evidence was captured, a robust systematic approach was followed. The main databases searched relevant to the nursing profession were MEDLINE (EBSCO), Delphis, Cumulative Index of Nursing and Allied Health Literature (CINAHL) and Allied and Complimentary Medicine Database (AMED). The initial stages of the search involved support from the University's research graduate library support team. Table 2 was created to list the range of terminology that denotes history taking and physical assessment. Boolean operatives AND and OR, truncations * or $ were used to combine search terms and narrow the search. Each term was entered into each database to identify the Medical Subject Headings (MeSH). Adopting this approach enabled terms to be condensed into to four main search terms.

Table 2: Four Main Category Headings and Alternative Search Terms.

Physical assessment or physical examination	History taking or medical history taking	Acute Care	Nurse
Physical examination	Patient health history (Patientsand History)	Acute ward	Registered nurse
Nursing assessment	Complete health history	Acute hospital ward	Advanced nurse practitioner or nurse practitioner
Physical assessment	Episodic history	Inpatients	Higher level
Health assessment	Health history	Acutely ill	Extended or expanded roles
Focused	History taking (subject heading medical history taking)	Hospitalisation	Staff nurse
Body systems	Communication	Clinical acute ward	General ward nurse
Head to toe	Clerking	Level 1 care	Acute care nurse
Systematic physical assessment		Acute care	Ward nurse

The main search terms were then entered into the four main databases and combined as shown in Table 3. Combining all four main search terms narrowed the results too much, so I decided to read the abstracts of all articles in search numbers 6 and 7 as highlighted in blue in Table 3.

Relevant articles, where possible, were obtained and reviewed. The first search commenced in 2012 and was last updated in October 2022.

Table 3: Search Results for Main Databases

Search Number	Main SearchTerms	CINHAL	Delphis	MEDLINE	AMED
1	History taking or medical history taking	18622	228741	39730	633
2	Physical assessment or physical examination	102, 349	87994	211730	9972
3	Nurse	466, 544	2289078	346,192	6551
4	Acute care	71270	8587	173510	3053
5	1 and 2	5982	6181	8461	101
6	5 and 3	604	1001	567	1
7	6 and 4	52	4	37	0

When identifying the criteria to aid selection of relevant papers it was necessary not to exclude studies that combined acute care areas with others, as whilst it might not portray a clear picture of acute care, it was possibly that it might highlight similarities or differences in nurses' use of HTPA skills. Initially an immense number of articles were generated and to capture those relevant to this literature review it was necessary to identify exclusion/inclusion criteria as detailed in Table 4.

Table 4: Inclusion and Exclusion Criteria

Criteria	Inclusion	Exclusion
Focus of study nurses.	Nurses (all roles) use/experience of HTPA. relating/applicable/transferable to acute care.	Evidence related to nurses using skills in classrooms settings. Evidence exploring advanced nursing roles where HTPA is not the focus. Evidence of different health care professionals as role different or skills applied differently.
Clinical practice setting.	Adult acute care settings. Adult acute care combined with another setting. Hospital inpatients and outpatients' settings. Non-hospital i.e. acute care in the community.	Paediatric only setting. Midwifery only setting. Non-acute only setting. Critical care only setting. All the above might use different types of skills relevant only to their setting which would not be transferable.
Country of Origin.	All countries.	
Date.	No date restriction. Evidence potentially spans over 60 years due to the introduction of HTPA at different times in various countries nursing profession.	
Language.	English.	Non-English to avoid any ambiguity or misinterpretations of information.

For completeness additional web base resources, Web of Science, Wiley online, Google Scholar and ResearchGate were accessed for completeness of the search strategy. Reference lists of all fully read papers were scrutinised in case titles of papers suggested they might be appropriate to access. Despite reading each abstract, further filtering was necessary after reading retrieved articles fully in case papers did not include advanced physically assessment skills. For instance, Zambas' (2016) article titled 'The consequences of nurses using advanced physical assessment skills' only used basic physical assessment skills which was acknowledged in the conclusion as the 'elephant in the room' because it focused on skills associated with vital signs. Several Iranian studies were excluded due to ambiguity in their use of the term physical assessment skills, which appeared to relate more to general nursing assessment. ResearchGate revealed a couple of Korean studies later discarded as not written in English. One paper from Brazil by de Oliveira et al. (2016) was relevant and included. Grey literature was explored as it can widen the parameters to include a range of resources, such as conferences, academic papers, and government reports. No relevant resources were found.

Figure 1 illustrates this filtering process which identifies a total of 22 papers that fulfilled the inclusion criteria to be included in this literature review.

Figure 1: PRISMA flowchart Illustrating the Filtering Process

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                    ┌─────────────────────────────────────┐
                    │ Titles & abstracts identified &      │
                    │ screened n=2266                      │
                    └─────────────────────────────────────┘
                                     │
                                     │              ┌──────────────────────────┐
                                     │─────────────→│ Excluded as focus not on │
                                     │              │ or not about HTPA n=2221 │
 ┌──────────────────────┐           │              └──────────────────────────┘
 │ Papers identified    │           │
 │ from e-depositories  │           │              ┌──────────────────────────┐
 │ n=1                  │──────────→│─────────────→│ Unable to obtain         │
 │                      │           │              │ n=5 (thesis & articles)  │
 │ Papers identified    │           │              └──────────────────────────┘
 │ from searching       │           │
 │ citations n=7        │           │              ┌──────────────────────────┐
 └──────────────────────┘           │─────────────→│ Duplicated papers n=2    │
                                     │              └──────────────────────────┘
                    ┌─────────────────────────────────────┐
                    │ Full copies retrieved and accessed   │
                    │ for eligibility n=46                 │
                    └─────────────────────────────────────┘
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                                     │              ┌──────────────────────────┐
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                                     │              │ foreign language n=6     │
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                                     │              ┌──────────────────────────────┐
                                     │              │ Excluded comparisons in      │
                                     │              │ performance skill between    │
                                     │              │ different professions n=2    │
                                     │─────────────→│                              │
                                     │              │ Excluded focus on teaching   │
                                     │              │ methods n=3                  │
                                     │              │                              │
                                     │              │ Excluded as skills not       │
                                     │              │ explicit n=13                │
                                     │              └──────────────────────────────┘
                    ┌─────────────────────────────────────┐
                    │ Papers meeting inclusion             │
                    │ criteria n=22                        │
                    └─────────────────────────────────────┘
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To assess the quality of evidence the qualitative CASP tool for qualitative studies and Joanna Briggs checklist for cross-sectional studies was used to assess the quality of evidence. Two articles (Voight, 1970; Baid et al., 2009) were of low quality, and as they were not directly relevant to acute care, they were excluded following the critique, leaving 22 studies to be synthesized into the final literature review. A summary table (Appendix A) was created to synthesise information. The findings of the literature review were presented in categories.

2.2.1 Countries of Origin

Primary sources retrieved from the USA (n=5), UK (n=5), Australia (n=4), Japan (n=3), Brazil (n=1), Italy (n=1), Korea (n=1), China (n=1) and Jordan (n=1) show physical assessment skills are being used by nurses in the nursing profession globally.

2.3 Discussion of Findings

This section presents a discussion of the findings from the papers retrieved and reviewed throughout the literature search. From the summary table (Appendix A) three main categories were identified as relevant to nurses' use of HTPA

- Nurses' use of physical assessment skills in clinical practice
- Factors influencing nurses' use of physical assessment skills
- Changes to nursing practice

Although each category will be addressed separately, all three categories related to each other.

2.3.1 Nurses use of physical assessment skills in clinical practice

Survey studies (Brown et al., 1987; Vines and Simons, 1991; Reaby, 1991; Lont, 1992; Yamauchi, 2001; Secrest et al., 2005; Giddens, 2007; Oh et al., 2012; Birks et al., 2013; Anderson et al., 2014; Cicolini et al., 2015; Osborne et al., 2015; Douglas et al., 2015; Maejima and Ohta, 2018; Mitoma and Yamauchi, 2018; Shi et al., 2019; Kutah, 2021) have dominated the research on the type and frequency of nurses' use of physical skills in the clinical setting. Internationally, educationalists (to some degree) have driven this particular area of research to determine whether nurses are using all of the taught skills in the clinical setting. Furthermore, survey studies appear to have placed great emphasis on the frequency of a skill as being a fundamental skill. One of the problems with

measuring the 'frequency' of physical skills is it does not equate to the relevance or importance of the skill in clinical practice (Osborne et al., 2012).

Earlier survey studies (Brown et al., 1987; Vines and Simons, 1991; Lont, 1992) used simple questionnaire designs collecting ordinal and nominal data on the frequency and type of taught physical examination skills used by nurses. Lont (1992) focused on Australian nurses' use of auscultation (lungs) and found 89% of nurses (n=116) reported performing this skill daily. Results from Brown et al. (1987) and Vines and Simons (1991) showed American nurses used few physical skills associated with auscultations (chest, lungs, bowels), percussion (chest) and palpation (abdomen) most frequently (daily/weekly). However, this may have been due to questionnaires listing 47 and 17 skills, respectively, of which many were basic physical assessment skills e.g. palpate pulses. Due to these studies' design limitations, it was not possible to make links between nurses' clinical settings and the type of skills being used. A key problem with the sample selection in these early studies concerned when nurses had been taught physical assessment skills; some nurses were taught as postgraduates and others as undergraduates, and this most likely reflects the transitional period of taught assessment skills from postgraduate into undergraduate nursing curriculums which might have affected these survey results.

Giddens' (2007) USA survey questionnaire listed 126 items based on examination textbooks, acknowledging both the validity and reliability of the tool were undetermined. Giddens (2007) justified inclusion for a high number of skills to minimise the risk of researcher bias i.e. not to make assumptions about nurses' use of physical skills, even though certain assessment skills were unlikely to be used by most nurses e.g. palpate uterus. Convenience sampling was used to recruit 193 nurses working in different fields of nursing e.g. adult, midwifery, and paediatric. Although convenience sampling is considered less representative and the commonest method of recruiting participants (Parahoo, 2014) it does provide an overview of skills used in a range of different clinical care settings. Giddens (2007) attributed the large population sample due to the gift voucher incentive. Results found 30 skills mainly involved inspection and palpation techniques of basic physical assessment e.g. inspect skin colour, and only auscultation (heart, lungs, bowels) and abdominal palpation of physical assessment skills were used regularly by most nurses. Giddens (2007) deemed all 30 skills as 'core' i.e. fundamental for all nurses to use in clinical practice, irrespective of the field of nursing.

Four studies, one in Korea (Oh et al., 2012), one in Italy (Cicolini et al., 2015), one in Japan (Maejima and Ohta, 2018), and one in Jordan (Kutah, 2021) used Giddens' (2007) 30 'core' skills to

determine if nurses in their countries also used these 'core' skills. Comparisons are difficult due to varied stratification of categories e.g. different clinical settings and different statistical analyses had been undertaken; however, results showed that not all 'core' basic physical assessment skills were used by many nurses. Additionally, 'core' physical skills involving auscultation were used by few nurses. The data does suggest a global trend of nurses' heavy reliance on basic physical assessment skills rather than physical assessment skills. A limitation of using Giddens' (2007) questionnaire of 30 'core' skills is it mainly consisted of basic skills and few physical assessment skills. This means it is possible that nurses might be using other physical skills not listed on the questionnaire.

Osborne et al's. (2015) Australian survey modified Giddens' original questionnaire listing 126 skills to include 133 skills (additional vital signs e.g. oxygen saturation, blood pressure) to identify which skills were used regularly 'core' by nurses in clinical practice. A cross-sectional design was used and is appropriate for non-experimental descriptive studies, enabling data to be gathered across representative subgroups and participant populations at a specific time (Lavrakas, 2008). Osborne et al. (2015) purposively recruited 434 nurses working in acute care. Results showed only 10 'core' vital sign skills were used regularly by nurses. A further 69 skills were identified by nurses as never learned and 24 skills were never performed. Osborne et al. (2015) raised concern that the number of physical assessment skills used by nurses had not only reduced considerably but deemed 10 'core' vital sign skills too narrow in scope to support nurses in the vigilant surveillance of acute care patients' health conditions. It is both surprising and concerning that nurses working in acute care do not appear to be using auscultation skills e.g. lungs, heart, and bowels on a regular basis.

Further surveys that have used a modified or full version of Giddens' original questionnaire (126 skills) include Birks et al's. (2013) survey of 1220 nurses' use of 121 skills, Anderson et al's. (2014) survey of 72 nurses' use of 126 skills, and Douglas et al's. (2015) survey of 239 student nurses' use of 126 skills. All three studies found nurses predominantly relied on basic physical assessment skills. Only Anderson et al. (2014) acknowledged that using Giddens' (2007) 126 skill questionnaire was a limitation of the study as certain skills were probably now less relevant to current nursing practice, and reasoned this might have contributed to nurses not knowing 71 of the 126 skills. It is curious that other researchers, given they have an educational focus, have not questioned the appropriateness of the skills listed in Giddens' original questionnaire. It might be a key point for other researchers of future survey research to be aware of so they can consider alternative questionnaire designs that better reflect current nursing practice.

Shi et al. (2019) designed a questionnaire listing 171 skills using a nursing textbook, published articles, and research staff. The expertise of the research staff was not identified and there was no rationale given for the large number of skills listed, given that many skills were very specific e.g. examining external genital organs. Shi et al. (2019) mentioned using Virginia Henderson's framework to underpin the study, yet it was not clear how this framework had been applied throughout the study. The results obtained from 1115 nurses found 94% of nurses relied heavily on inspection techniques and used fewer palpation, percussion, and auscultation skills (Shi et al., 2019).

Only one study has included history taking skills and identified that over 60% of nurses use the skills frequently/regularly (Brown et al., 1987) but did not detail what aspects of history taking were used. Given some type of patient history directs nurses in their subsequent patient examination, it is surprising that other studies have not included history taking skills. Whether this is due to educationalists giving more attention to the physical assessment skills because they appear more difficult to master or because more importance is given to teaching physical skills is unknown.

2.4 Factors influencing nurses' use of Physical Assessment Skills

Some survey studies also identified barriers restricting nurses' use of physical assessment skills (Brown et al., 1987; Vines and Simons, 1991; Reaby, 1991; Yamauchi, 2001; Giddens, 2007; McElhinney, 2010; Edmunds et al., 2010; Birks et al., 2013; Osborne et al., 2015; Douglas et al., 2015; Shi et al., 2019). Barriers cited by nurses included a lack of confidence, role ambiguity, reliance on technology, education/knowledge, lack of opportunity, lack of support, lack of time, and ward culture. Only McElhinney's (2010) survey to date has examined both enabling and inhibiting factors influencing the use of skills. It is remarkable that research has given greater focus to identifying barriers that prevent nurses' use of the skills rather than facilitating factors; perhaps more research focusing on factors that might help nurses would be more conducive and is an underexplored area.

By exploring factors that inhibited and facilitated nurse practitioners' (NPs) use of skills, McElhinney's (2010) study pointed research on nurses' use of physical skills in a new direction. McElhinney (2010) used an electronic Delphi (e-Delphi) technique which involved group communication in an iterative process as the method to seek consensus on factors influencing NPs use of physical skills in the clinical area. E-Delphi employs a series of questionnaires; each

subsequent questionnaire is developed on the results of the previous questionnaire, and so on. Three iterative rounds were used increasing both the validity and reliability, and content analysis was used for data analysis which is considered robust (Petry et al., 2007). Whilst documentation was brief for e-Delphi round one, detail is explicit for the subsequent two rounds (McElhinney, 2010). In busy healthcare settings and across large organisations, such as the NHS, e-Delphi is an advantageous technique for having the ability to transfer data from prior rounds quickly and efficiently between group members. This means that participants' time spent in the study can be reduced and logistical issues associated with face-to-face meetings e.g. focus groups/interviews can be avoided. Furthermore, the researcher controls participants' access to information, meaning participants might be able to see other participants' responses or only their own until consensus is sought (Skulmoski et al., 2007).

2.4.1 Nurses' Confidence and Competence

A lack of confidence has consistently been reported by nurses as a key factor influencing their use of physical skills (Brown et al., 1987; Vines and Simons, 1991; Reaby, 1991; McElhinney, 2010; Aldridge-Bent, 2011; de Oliveira et al., 2016; Mitoma and Yamauchi, 2018). A UK study of acute care NPs reported that they felt unconfident in their ability to specifically perform auscultation of heart sounds (McElhinney, 2010). Likewise, student nurses felt insecure performing auscultation and lacked 'hearing sensitivity', inferring that they might not have been able to distinguish between different sounds (de Oliveira et al., 2016). Auscultation techniques can be more difficult to perform due to uncertainty in what an individual is hearing which might cause them to feel less confident. NPs and DNs have also lacked confidence in assessing the abdominal system (McElhinney, 2010; Aldridge-Bent, 2011).

A UK qualitative study exploring seven cardiac care nurses' use of physical examination skills found nurses felt less confident when they stopped using the skills. These same nurses felt they had lost the ability to use the skills (Edmunds et al., 2010). Edmunds et al's. (2010) longitudinal approach consisted of interviews, observation, and nurses completing self-reporting logs at 6- and 9-month intervals. Few nurses completed the self-reporting logs which might have affected the findings. Equally, Edmunds et al. (2010) offered no reason for obtaining data at 6- and 9-month time periods and arguably there might have been little change in nurses' use of the skills between the three-month data collection period.

Brown et al. (1987) found that as nurses' feelings of confidence increased so did their feelings of

competence. NPs identified feeling more confident in their own ability to use physical examination skills as they became more consistent in diagnosing problems (McElhinney, 2010), suggesting that perhaps competence might also have been a contributory factor here. Aldridge-Bent (2011) noted that DNs expressed concern over issues relating to competence and ways of maintaining competence but did not elaborate on what these concerns or ways might be. A point of interest is that competency does not appear to feature in much of the evidence yet given the importance of competency in nursing it seems an important component that has been neglected.

Confidence also seems to be linked to emotions, such as increased anxiety which was thought to be associated with NPs increased responsibility because of using skills (McElhinney, 2010). A UK qualitative study exploring three DNs' experience of using physical skills caused them to feel more anxious in performing the abdominal assessment, due to the assessment of this system being too complex (Aldridge-Bent, 2011). Although Aldridge-Bent (2011) used a thematic approach which is appropriate for qualitative studies, no specific approach was outlined meaning the transparency of the data analysis processes is less evident. It is also important to note that anxiety reported by NPs (McElhinney, 2010) and DNs (Aldridge-Bent, 2011) indicates that these nurses mostly likely worked in advanced nursing roles. It may well be that nurses working in advanced roles have increased accountability which in turn causes them to experience emotions, such as anxiety, when performing more difficult physical skills. Moreover, only UK nurses have reported feelings of anxiety and increased responsibility which might be idiosyncratic to the UK where these skills were taught post-registration, compared to other countries where physical skills are taught as part of undergraduate curriculums. Additionally, nurses in these UK studies might be in more senior positions compared to participants in studies from other countries which targeted all nurses, meaning UK nurses might perceive differences in using skills according to their professional responsibilities and accountabilities. Overall, it is clear that nurses perceived confidence as a factor both facilitating and inhibiting their use of physical skills.

2.4.2 Nurses' Role

As mentioned previously, the nurse's role appears important in determining the amount of physical examination used. Surrounding 'role' is the continual uncertainty of who is professionally responsible for utilising skills in acute care settings (Birks et al., 2013). Birks et al. (2013) raised the concern that, with more healthcare professionals such as the doctors, nurses, and physiotherapists working in acute care ward settings and all using examination skills, if a patient has difficulty breathing which healthcare professional takes the responsibility to perform a

respiratory assessment. In areas like acute care where time is of the essence, a lack of clarity about whose 'role' is responsible might lead to delays in patient assessment and interventions, creating tensions amongst healthcare professionals.

Equally, nurses working in advanced or senior roles used fewer physical examination skills which was thought to be due to senior roles having less contact with patients (Osborne et al., 2015). Nursing students saw physical skills as not a nursing responsibility (Douglas et al., 2015). Although reasons for this were unknown, Douglas et al. (2015) believed this may be because the skills are perceived as medical rather than nursing skills. Some studies have found nurses with five or more years of clinical experience used more skills (Oh et al., 2012; Kutah, 2021) while others have found that experienced nurses used fewer skills (Birks et al., 2013; Osborne et al., 2015).

Hospital cardiac care nurses working in different clinical settings had divided opinions as to whether physical assessment skills were part of the nurse's role, or not (Edmunds et al., 2010). Reasons for this might be reflected in nurses' individual roles, which were not made explicit. DNs (Aldridge-Bent, 2011) echoed similar opinions that indicated the use of skills would impact on their time spent with patients to deliver other aspects of nursing care. This led these same DNs to question who would perform their nursing tasks if they undertook physical assessment skills (Aldridge-Bent, 2011). This might be indicating that nurses feel they require a more direct understanding of what tasks are part of their roles and responsibilities. Edmunds et al. (2010) found that cardiac nurses who perceived skills as part of their role successfully integrated skills into their nursing practice, but it was not mentioned whether these nurses worked in advanced practice roles. This is important as nurses working in advanced roles might be more likely to consider physical skills as part of their role, because these skills form a fundamental part of such nursing roles. Edmunds et al. (2010) concluded that nurses with tight working boundaries sought medical permission before using examination skills (Edmunds et al, 2010). It is assumed that these nurses working within tighter boundaries might use skills to augment their assessment of patients e.g. ward nurses and thus it seems they may be less certain whether or not they have permission to use skills. Edmunds et al. (2010) and Aldridge-Bent (2011) both recommended a need for more explicit job descriptions and roles detailing if physical assessment skills are required to aid clarity for nurses. This indicates that more research is required to explore nurses in different roles to gain a greater understanding of the relationship between their roles and the use of skills.

Two studies on student nurses' (Douglas et al., 2015; de Oliveira et al., 2016) use of examination skills found student nurses perceived physical assessment skills as not a nursing priority because

they never saw registered nurses use these skills. The general consensus among student nurses' perceptions of skills in clinical settings was that physical assessment skills were unimportant (Douglas et al., 2015). Furthermore, some student nurses added that, when in clinical placement, they were never encouraged by other nurses to practice using examination skills (Douglas et al., 2015; de Oliveira et al., 2016). Taken together it may be that some nurses consider skills irrelevant to their nursing role.

2.4.3 Clinical Setting

The clinical setting or area in which nurses work is thought to influence the type of examination skills used. Participants in all the studies were recruited from a range of different clinical settings and had all been taught examination skills. Clinical settings mainly included community, nursing homes, acute care, non-acute care, critical care, rehabilitation, surgery, medicine, oncology, outpatients, peri-operative, maternal, and mental health. The majority of nurses in the studies were registered nurses (RN). Two studies only involved nursing students (Douglas et al., 2015; de Oliveira et al., 2016). Several studies recruited nurses in various roles, including ANP/NPs, nurse managers, ward nurses, researchers, and hospital educationalists (McElhinney, 2010; Edmunds et al., 2010; Aldridge-Bent, 2011; Birks et al., 2013; Osborne et al., 2015). In other studies, acute care nurses were amalgamated with non-acute, community, mental health, midwives, and paediatric nurses (Secrest et al., 2005; Giddens, 2007; Cicolini et al., 2015), again making comparison of all these studies unfeasible. Even though most findings showed variation between different fields of nursing and clinical settings to provide general insight into nurses' use of physical assessment skills, more needs to be known about acute care nurses' use of skills.

Cardiac care nurses reported using cardiovascular and respiratory assessment skills the most (Edmunds et al., 2010). Nurses working in critical care, intensive care, and peri-operative settings have been found to use auscultation skills (heart, lungs, bowels) more frequently as part of their routine practice (Secrest et al., 2005; Giddens, 2007; Birks et al., 2013; Cicolini et al., 2015; Mitoma and Yamauchi, 2018). Nurses working in nursing homes and community settings used more auscultation skills compared to those in hospital settings (Cicolini et al., 2015; Mitoma and Yamauchi, 2018). Cicolini et al. (2015) proposed nursing homes and critical care areas are challenging settings for nurses to work in, so nurses often make independent decisions or have critically ill patients so that they need to use more skills. It is interesting to note that nurses working in areas where patients are more critically ill (intensive care) or where nurses might have less medical support e.g. nursing homes, still only use a few taught physical assessment skills.

Another survey (Kutah, 2021) found the clinical setting and particular area of speciality did not influence the type of skills used by nurses. Kutah (2021) reasoned this was probably due to many skills listed on the questionnaire being basic physical assessment skills used by nurses across all clinical settings.

2.4.4 Governmental and Organisational Influences

Whilst vigilant observational skills are essential in detecting clinical deterioration, concern surrounds acute care nurses' reliance on vital signs and the Glasgow Coma Scale (GCS) (part of basic physical assessment skills) (Osborne et al., 2015; Douglas et al., 2015). Physical examination skills are not utilised routinely as part of nurses' assessment practice (Osborne et al, 2015; Douglas et al., 2015). Douglas et al. (2015) and Osborne et al. (2015) claimed nurses' reliance on vital signs and GCS was associated with completing Modified Early Warning Systems (MEWS) tools that assess the severity of a patient's illness. Both asserted Governmental and organisational policies on patient safety agendas, such as failure to rescue and recognition and response to clinical deterioration, compel nurses to focus wholly on performing vital signs and GCS (Douglas et al., 2015; Osborne et al., 2015). As a result, a greater emphasis appears to be placed on nurses to complete vital signs and GCS rather than employ physical assessment skills. Osborne et al. (2015) concluded that nurses quite possibly associate vital signs as being the only type of assessment seen to be important by others. Birks et al. (2013) felt nurses only use certain skills to aid recognition of abnormality in patient rather than medical diagnosis and for this reason nurses do not need to use all physical assessment skills.

Physical assessment skills are viewed as essential to recognise and identify early subtle cues and signs indicative of clinical deterioration (Secrest et al., 2005; Douglas et al., 2015). In comparison, vital signs are deemed task orientated and identify later signs of clinical deterioration (Douglas et al., 2015). Douglas et al. (2015) believed that nurses' inability to implement physical skills prevents them from developing critical thinking skills.

Edmunds et al. (2010) found some cardiac nurses thought the drive for nurses to use physical assessment skills was from the Government rather than the nursing profession. Some of these same nurses indicated that if they had to embrace changes and use physical skills it would be reluctantly. For other cardiac nurses, it was perceived that the nursing profession was pushing for nurses to use physical examination skills which nurses should embrace. It might be that whoever nurses perceive as being responsible for encouraging nurses to use HTPA skills i.e. government or

nursing, possibly influences nurses' individual decisions as to whether they will use HTPA skills as part of their role, or not.

2.4.5 Culture

For some, culture involved customs relevant to nursing in certain countries. Yamauchi (2001) and Maejima and Ohta (2018) referred to culture as a barrier restricting Japanese nurses' use of inspection skills, whilst Italian nurses used more inspection skills in contrast to Japanese nurses (Maejima and Ohta, 2018). Conversely, Maejima and Ohta (2018) found that Japanese nurses were more likely to use auscultation skills compared to Italian nurses because auscultation is considered a basic assessment skill. Maejima and Ohta (2018) concluded that cultural differences between Italian and Japanese nurses might be a reason for this difference but did not expand on what they meant by cultural differences. It may well be that, in Japanese culture, inspection which requires closer visual examination, is considered less acceptable.

In other studies, culture was related to the ward environment in which nurses worked and their everyday tasks. A lack of nursing role models was a barrier (Douglas et al., 2015), a view shared by student nurses who felt too awkward to practise the skills (de Oliveira et al., 2016). To feel accepted as part of the nursing team student nurses are far more likely to imitate ward nurses and therefore if ward nurses do not use skills, student nurses are less likely to use the skills themselves. Time constraints, busy working environments, and heavy workloads meant there was a lack of time to use skills. Birks et al. (2013) pointed out that nurses working in busy wards might be less likely to complete thorough physical examinations and hence only use techniques that can be completed quickly e.g. inspection (observational) and vital signs. NPs expressed that a lack of protected time to learn physical skills was a barrier (Raleigh and Allan, 2016), while Shi et al. (2019) noted China has fewer nurses compared to countries, like America and Japan, resulting in Chinese nurses having less time to use the skills. For some nurses, a lack of time to document physical assessment findings was a barrier (Douglas et al., 2015), whereas others reported too much paperwork meant less time for using skills (Birks et al., 2013). A lack of documentation to record findings of a physical examination was considered a barrier that inhibited nurses from using numerous skills (Shi et al., 2019). One nurse reported that when working night shifts they were less likely to use physical skills (Birks et al., 2013), probably because at night the ward routine is centred on promoting patients' sleep.

Some final year nursing students felt it was pointless using physical skills for in-depth assessments

due to doctors replicating their assessment. For other student nurses their contribution in assessing patients was perceived as being overlooked by clinical colleagues, such as physiotherapists (Douglas et al., 2015). Douglas et al. (2015) noted doctors' replication of student nurses' patient assessments makes nursing appear 'subordinate' to medicine. However, another way of viewing this could be that doctors might not know if an assessment has been performed competently, especially by student nurses. Part of a doctor's professional responsibility would be to repeat the assessment as ultimately findings from the assessment would direct any further course of action regarding a patient's care. More exploration of some of these contextual features would enable more understanding in ward settings of the use of HTPA skills.

The increasing use of technology is becoming a key feature of the ward culture and a barrier preventing nurses' use of HTPA skills. Osborne et al. (2015) determined predictors of acute care nurses' use of physical assessment skills in hospitals. Their results established an over reliance on others and technology as the two main predictors of nurses' use of skills. However, these results should be interpreted with caution as there was no indication as to who 'others' referred to. Furthermore, there was no evidence in the data indicating if acute care nurses made any distinction between 'others' and 'technology'. Osborne et al.'s (2015) discussion of their finding about technology was difficult to follow, and they appeared to be equating technology with vital signs, thus inferring that nurses might view vital signs, and hence technology, as a barrier to using physical skills. Evidently, more content and context are needed to be able to explore the use of HTPA further as the use of technology in acute care is highly pertinent.

2.4.6 Educational impact

Reaby's (1991) survey design evaluated 23 nurses' use of skills following attendance at a taught five-day physical examination skills module. A pre-post-test questionnaire listing 36 items (skills) was completed by nurses before attending the taught module and three months after. Once the module had completed, nurses (50%) reported an increased use of percussion (chest), auscultation (heart, lungs, bowels), and palpation (abdomen) skills. No statistical difference was found in nurses' use of skills relating to the nervous system e.g. muscle strength, gait, and coordination. This may be because nurses can assess aspects of the nervous system whilst completing other nursing tasks e.g. helping to mobilise patients, and therefore might have already been using these particular skills. Reaby (1991) concluded that the combination of education and repeated opportunities to practise physical examination skills contributed to nurses' increased use of percussion techniques. Even though face validity and content validity rely on subjective

opinion, Reaby (1991) undertook a pilot study and expert (educator) review of the questionnaire tool, thereby increasing its validity. The reliability of the tool was not acknowledged. Nurses also reported that opportunities to practise using physical skills helped them to use the skills more often (Edmunds et al., 2010). Thus, repeated practice and opportunities to use the skills both seem important factors that could facilitate nurses' use of physical skills.

Thirty-eight nurses (n=116) reported never having been formally taught chest auscultation, either as a student or registrant nurse, and only 31 nurses reported never performing chest auscultation (Lont, 1992). This finding suggests a dichotomy between the number of nurses reporting never having been taught and never using the skill. Although it is not possible to say with any degree of certainty, and there may well be other explanations, it is a possibility that some nurses might have learned the skill experientially from other clinical colleagues. Whilst nurses do learn clinical skills experientially as student nurses, they often receive theoretical knowledge underpinning such skills e.g. taught principles of aseptic technique and learn experientially different types of wound dressings. Thus, experiential learning may have limitations regarding nurses acquiring the relevant knowledge underpinning the use of physical examination skills.

Nurses have identified a lack of knowledge or familiarity with physical assessment skills as a barrier restricting them from using numerous skills (Vines and Simon, 1991; Yamauchi, 2001; Anderson et al., 2014). Birks et al. (2013) considered the benefit of teaching physical examination skills and the theoretical knowledge that underpins them to be inherently valuable for nurses. Twenty-seven nurses (n=116) admitted to not knowing what they were listening for or how to differentiate breath sounds when performing chest auscultation (Lont, 1992). Whilst this finding is concerning on its own i.e. context lacking, this finding might not be that unusual. For instance, nurses working in critical care areas are often shown how to auscultate patients' lungs e.g. patients receiving ventilation, merely to listen for air entry. However, a lack of clinical context surrounding nurses' use of physical assessment skills does restrict our understanding of this barrier. As mentioned earlier, student nurses have echoed similar problems with learning auscultation skills (de Oliveira et al., 2016).

Jordanian nurses (Kutah, 2021) working in the public sector used more skills compared to nurses working in the private sector. A lack of education and training in the private sector was proposed as a possible explanation for this difference (Kutah, 2021). Other nurses have reported a lack of training (Shi et al., 2019) and a lack of knowledge that influenced nurses' confidence (Raleigh and Allan, 2016) as reasons for not using physical assessment skills.

Some studies reported that more highly educated nurses used more skills, even though the skills were mainly basic physical assessment skills (Shi et al., 2019). Moreover, nurses with five or less years of clinical experience needed more training in using physical skills, particularly using auscultation techniques (Oh et al., 2012).

The lack of taught physical examination skills used in clinical practice has concerned educationalists and debate has focused on what physical assessment skills should be taught to nursing students as part of their undergraduate curriculum (Secrest et al., 2005; Giddens, 2007; Douglas et al., 2015). Some educationalists think many physical examination skills are redundant to most nurses (Secrest et al., 2005; Giddens, 2007; Birks et al., 2013) whereas others have suggested that skills are not used to their full capacity (Douglas e al., 2015; Osborne et al., 2015). Despite these alternative views, across the literature, there appears to be consensus that physical skills should be incorporated more as part of nurses' routine assessment practice. Since the introduction of HTPA in the UK undergraduate nursing curricula due to recent changes to the NMCs standards for pre-registration nursing education, these findings could be very relevant to UK educationalists.

2.5 Nursing Practice

Nurses have recognised that the use of physical assessment skills has benefitted their nursing practice. Positive changes reported in nurses' practice have included the ability to recognise anomalies and abnormalities, increased collegial relationships, better interaction with patients, improved communication with doctors by using medical terminology and increased credibility in making patient referrals (Reaby, 1991; Colwell and Smith, 1985; Brown et al., 1987; Edmunds et al., 2010; McElhinney, 2010; Aldridge-Bent, 2011; de Oliveira et al., 2016).

Acute care NPs showed consensus and perceived that their role in being able to use physical skills meant they could make a difference in patient care (McElhinney, 2010), indicating a strong belief in the benefit of using physical assessment skills. One DN spoke about changes in their nursing practice since using physical skills and explained how they would now undertake a cardiovascular assessment on patients who had poor circulation and leg wounds, whereas previously this DN would only have focused on the leg wound (Aldridge-Bent, 2011). Likewise, one cardiac care nurse expressed examining patients more "intelligently" (Edmunds et al., 2010:285), perhaps alluding to nurses' ability to perform a more informed holistic assessment when physical examination skills are used as part of their nursing practice.

Two outreach nurses shared how they provided nursing support to acutely ill patients when using physical assessment skills (Coombes and Moorse, 2002). Both these nurses recognised and identified subtle signs of clinical deterioration that enabled them to report their interpretation of the findings, ultimately resulting in these patients receiving prompt medical intervention. These same outreach nurses concluded that timely intervention had contributed to improving their patients' conditions which they regarded as improving patient outcomes (Coombes and Moorse, 2002). More importantly, timely recognition and response to early clinical signs of deterioration might prevent patients from requiring more invasive procedures which could necessitate transfer to higher acuity settings i.e. intensive care.

History taking is a key component of nursing patient assessment and is predominantly reflected in de Oliveira et al's. (2016) qualitative study exploring student nurses' perceptions of the importance of examination skills. These nursing students recognised the importance of history taking in that it provided a way to connect with their patients and become acquainted with their patients' needs. Interestingly these same nursing students revealed feelings of empowerment and autonomy that enabled them to make decisions about patients' care. They also shared a strong belief that using physical assessment skills developed their critical thinking when making their decisions. It is clear that the use of physical assessment skills appears to assist nurses to make decisions which impact on their patient care. Nevertheless, student nurses are still undergoing their educational training and therefore exploring registered nurses' use of HTPA is a key under-researched area. A limitation of de Oliveira et al's. (2016) study was the lack of transparency throughout the data analysis; apart from acknowledging the use of an interpretative approach, specific detail regarding any type of approach was lacking e.g. thematic analysis, and this, therefore, may have influenced the credibility of the findings.

Nurses perceived that the use of physical assessment skills improved the professional relationships, especially between doctors and nurses. One cardiac care nurse perceived that because they could use physical skills the doctors trusted them and responded better to their concerns (Edmunds et al., 2010). Similarly, acute care NPs felt that using the same terminology enabled them to communicate with doctors (McElhinney, 2010). McElhinney (2010) proposed this could be due to either NPs' increased knowledge of physical examination skills and hence their ability to communicate was at a higher level, or because NPs could now understand medical language because of learning the terminology.

2.6 Summary of Findings

Despite being taught physical assessment skills it seems that many nurses use none or very few of these skills as part of their daily nursing practice. However, HTPA are widely perceived as being valuable skills for the nursing profession. Both role and clinical specialism seem to play an important part in the HTPA skills that nurses do use. Limited evidence indicates nurses in senior or advanced roles might use a wider repertoire of physical skills, possibly related to their individual roles mandating the use of such skills. Numerous factors act as barriers restricting nurses' use of skills, particularly, individuals' feelings of confidence, and ambiguity about the skills forming part of their role, the ward culture, and education. However, limited evidence surrounds factors enabling nurses' use of HTPA, such as confidence, and the nursing role. Positive changes to nurses' practice are perceived as increased collegiate relationships, better relationships with patients, and the ability to assess patients more holistically, thus improving patient care. Whilst much is known, nurses' use of skills appears multifaceted and complex, yet there is an even greater lack of evidence on nurses' use of both history taking and physical assessment.

2.6.1 Gaps in the Findings and Rationale for the study

There is little doubt that nurses' use of HTPA in acute care is under researched. Where studies have included nurses working in different clinical settings or where the study was acute care specific, the findings offer some insights that might be relevant for acute care nurses. Quantitative studies have determined the type and frequency of skills used and have started to show some indications that the content and context of the skills used appear to be a key area upon which to focus. However, to date, no qualitative studies have focused on acute care nurses' use of HTPA in the clinical setting, meaning that very little is known about whether or not these nurses are using HTPA in adult acute care, and if so how. This has become even more timely since the introduction of the teaching of HTPA skills in 2018 in the undergraduate nursing curriculum as stipulated by the NMC. Findings of this study should also offer valuable insights for educationalists involved in the delivery mode and content of the undergraduate curriculum or supporting students in their clinical placements.

2.7 Conclusion

The literature review has provided a global picture of nurses' use of HTPA across a diverse range of clinical settings. Whilst nurses seemingly underuse HTPA, and numerous factors influence the use of these skills, nurses' ability to use HTPA skills seems to offer potential benefits. Still, gaps clearly exist within the evidence, particularly nurses' use of HTPA in acute care settings.

Therefore, the purpose of this study is to contribute to our current understanding of nurses' use of HTPA skills in acute care so that the findings can be shared with others involved in working in adult acute care, as well as educationalists involved in the teaching of HTPA.

Chapter 3   Methodology

The findings from the literature review showed that the vast majority of studies that have focused on nurses' use of physical assessment skills have been quantitative. Whilst they have identified numerous factors influential in nurses' use of physical skills, they have not provided detailed insight into how and why these factors influence nurses' use of the skills. The few qualitative studies that have been undertaken have focused on specific acute care settings e.g. cardiac care and community settings, or have explored student nurses' perspectives. Importantly, these prior qualitative studies have had a strong educational focus, meaning there is less understanding of the contextual features surrounding nurses' use of physical skills. Furthermore, history taking has often been excluded from many of the prior quantitative and qualitative studies.

To facilitate the advancement of knowledge researchers are encouraged to select a methodological approach most appropriate to gather relevant data to address the research questions (Grix, 2010; Gerrish and Lathlean, 2015). Therefore, to explore nurses' and managers' perceptions and experiences of nurses' use of history taking and physical assessment skills in adult acute care settings, this study necessitated a qualitative research approach. This approach draws upon the broad concepts of a hermeneutical circle, underpinned by a social constructivist stance. Thus, the intent of this chapter is to make evident the relevant justifications and decisions, pertinent to the design and methodology of this study. As a reminder, the study's research questions are:

Q1.   How do nurses and their managers perceive nurses' use of history taking and physical assessment impacts on patient care?

Q2.   How do nurses and their managers perceive nurses' use of history taking and physical assessment' skills has changed their nursing practice?

Q3.   What do nurses and their managers view as influential factors that aid or hinder nurses' use of history taking and physical assessment' techniques in clinical practice settings?

3.1 Rationale for Social Constructivism Paradigm

Denzin and Lincoln (1998) referred to a paradigm as being 'a set of basic beliefs', that is, the essence of capturing abstract ideas, perceptions, beliefs, and values about how we view the nature of things in the world. In this sense, a paradigm can be considered to be a '*world-view*' of

how we see the world and is often described as viewing the world through a particular 'lens' (Guba and Lincoln, 1994). Any given paradigm consists of three discrete stances involving specific perspectives of knowledge; what is the nature of reality (ontology), what is the nature of knowledge (epistemology), and how to acquire the knowledge (methodology) (Denzin and Lincoln, 1998; Mann and MacLeod, 2015)? Therefore, in research numerous paradigms exist since different ontological, epistemological, and methodological stances can be combined, creating various 'lenses' through which to view a study's research questions. Ultimately, a study's ontological, epistemological and methodological stance influences the shape and structure of the paradigm, by identifying "what will be studied, how it should be studied, and how the results of the study should be interpreted" (Kivunja and Kuyini, 2017:27). My study aimed to understand factors influencing nurses' use of HTPA, together with changes to their nursing practice and the impact on patient care, by exploring nurses' and managers' perceptions and experiences. Thus, it was necessary to choose a paradigm most suited to addressing these three research questions (Berg and Lund, 2012).

Constructivism and positivism are two main paradigms positioned at opposing ends on the research continuum (Figure 2). Positivism's ontological stance is based on realism, holding a belief that there is a single reality, meaning that the world and objects in it exist independently and externally to the researcher (Weaver and Olsen, 2006; Scotland, 2012). Approaches in quantitative research, such as random controlled trials and surveys, are generally employed in gathering what is perceived to be objective data. These approaches distance the researcher from their subject, making them inadequate to obtain in-depth meanings and accounts of individuals' experiences and views (Grant and Giddings, 2002; Polit and Beck, 2004; Creswell, 2013) which is central to my study.

Figure 2: Research as Continuum (Adapted from Condie, 2012, slide 15)

Paradigm

Positivism   Social Constructivism

Ontology

Realism   Relativism

Epistemology

Objectivism   Subjective
                                                                          Transactional

Methodology

Quantitative   Qualitative
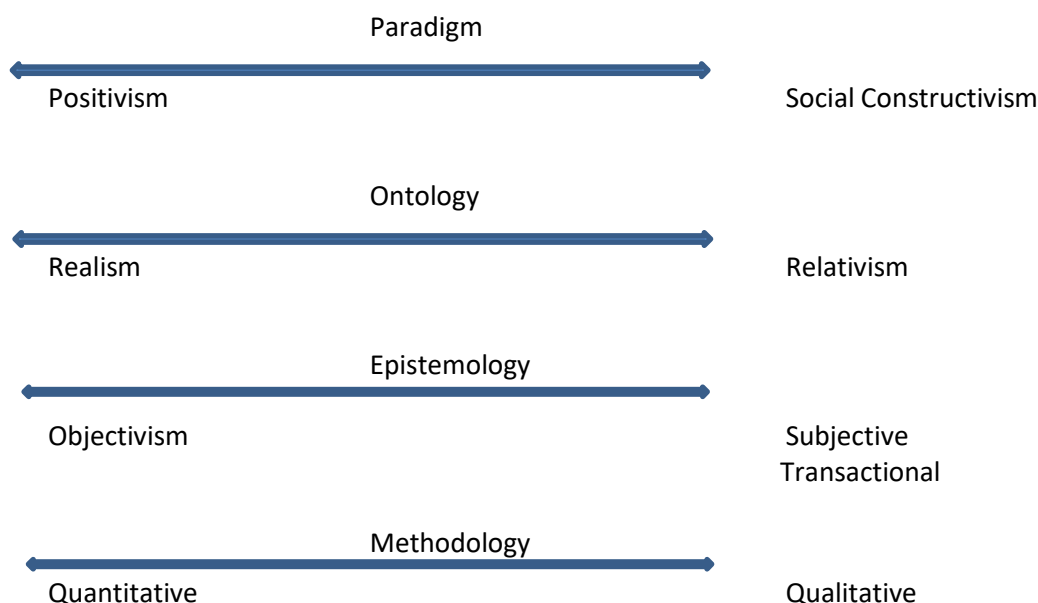
Qualitative research is aligned within a constructivist paradigm, as illustrated in Figure 2, and each aspect will be discussed later in detail below. Constructivism is a broad term that can be applied in different ways relating to both theories of learning and approaches to research (Mann and MacLeod, 2015). An overarching definition of constructivism is "the view that researchers individually and collectively construct the meaning of the phenomena under investigation; observation cannot be pure in the sense of excluding altogether the interests and values of individuals; and investigations must employ an empathic understanding of study participants" (Teddlie, 2009: 331). According to Crotty (1998), constructionism is about the collective generation of meaning, compared to constructivism which is about the meaning making activity of the individual mind. Social constructivism, as a theory about the development of knowledge, has roots within sociology and psychology. However, within the literature this term is often associated or interchanged with social constructionism (Schwandt, 1994), highlighting an inconsistency and lack of consensus in how both these terms are used. Burr (1995) drew attention to their close 'family resemblance' and the common features that both social constructivism and social constructionism share:

❖ To understand from individuals, from their perspective, the complex world of the lived experience
❖ Involves the researcher to be emic
❖ A belief that to understand the individual's world of meaning it must be interpreted.

A group and its social setting are fundamental for both social constructionism and social constructivism as without it meaning making cannot take place. Social constructionism, a term 'first coined' by Berger and Luckmann (1991), refers to a group of individuals that collaboratively and collectively interact, with an emphasis of the interaction on how they generate new knowledge. This means that it is occupied with the process of how the group forms meaning; it is focused on the thinking processes that occur in the group rather than the social setting of the group. Put another way, it is concerned with the groups' cognitive interactions, so how the group generated new knowledge is in the foreground and the social setting is in the background. Conversely, for social constructivism, emphasis is placed on the social settings and how this enables the groups' interaction and the generation of new knowledge. Now the social setting is at the forefront of meaning making. As well as social constructivism, there is personal constructivism which focuses on the cognitive processes of the individual learners' knowledge and experience that is created through interactions with others and their environment. Social constructivism focuses on the collective construction of knowledge as individuals interact together within a social setting, meaning knowledge is deemed as being socially constructed (Gergen, 1994; Mann and MacLeod, 2015). Since my study aims to explore nurses' and managers' experiences and views on nurses' use of HTPA, a social constructivist paradigm has been selected.

3.1.1 Social Constructivism and Ontology

Social constructivism adopts a relativist ontological stance seeking knowledge and truth as the result of individual perspectives. An individual's perspective is not something merely discovered, rather it is developed through the creation of knowledge and truth (Guba and Lincoln, 1994; Denzin and Lincoln, 1998). Put simply this means we only know about the world through our own representation of it. This means that 'truth' is a construction of 'reality' as developed in the minds of individuals (Rodwell, 1998). Everyone's construction of knowledge is as a result of their own perspective building on their prior experiences and knowledge. As individuals may have different prior experiences and knowledge, this gives rise to many constructions of knowledge known as multiple realities. When involving multiple realities, it is not the intention of qualitative research to determine which account amounts to the 'truth' as opposed to the 'untruth' or to seek consensus. Preferably its intention is to present multiple realities, thereby creating assorted versions of 'truth' to assist in understanding the phenomenon of interest in context more fully (Fine, 1996; Barbour, 2014).

Therefore, nurses' and managers' constructions of nurses' use of HTPA skills may result in consensus or dissonance as their individual experiences and views may be similar or may differ. Taking into account multiple realities allows for the diversity amongst participants to be captured. In my research, accessing multiple realities enabled the complexities of nurses' use of HTPA in adult acute care settings to be conveyed more fully. This study adopted a relativist ontological stance by allowing 'truth' to be 'whatever it is', whether there was consensus or not.

3.1.2 Social Constructivism and Epistemology

Social constructivism assumes that knowledge is a product of human interaction, meaning knowledge is socially constructed with a transactional and subjective nature. Transactionalism is considered to be at the heart of social constructivism, because individuals' social interactions are an essential feature in the collective construction of knowledge (Creswell, 2013; Mann and MacLeod, 2015). A transactional nature enables the researcher to interact closely with participants and gain an emic (insider) perspective. The culture and context, in which understanding occurs in the social setting, shapes the collective construction of knowledge (McMahon, 1997; Derry, 1999). Subjectivism refers to the researcher's role in 'constructing' their own meaning from the knowledge collectively constructed by individuals (Guba and Lincoln, 1994; Mann and MacLeod, 2015). Therefore, the transactional interaction between myself, nurses and managers in the social setting elicited the collective construction of knowledge on nurses' use of HTPA skills. This collective knowledge was then subjectively interpreted (reflexively) by myself to construct an 'impression' of the world as seen in my mind (Guba and Lincoln, 1994; Mann and Macleod, 2015). Furthermore, this enabled me to draw fully on my experience, being uniquely placed as a researcher, educationalist, and nurse.

3.1.3 Social Constructivism and Methodology

Social constructivism aligns with qualitative methodological approaches to elicit and acquire the desired knowledge (Guba and Lincoln, 1994). Initially, a qualitative case study methodology was given serious consideration. Case studies have been referred to as educational tools, narratives to describe fundamental aspects of a case (Brophy, 2008), a research strategy, method or approach (Simons, 2009). Therefore, the term 'case study' can cause confusion by its name, nature, and use (Merriam, 1998; Zucker, 2001; Brophy, 2008), particularly for novice researchers since it "has different meanings for different people and in different disciplines" (Simons, 2009:19). For example, Yin (2003) was an advocate for both quantitative and qualitative case studies, but his philosophical stance is based in positivism compared to Stake (1995) who was from a more

constructivist position. Despite this, Clarke and Reed (2010) attributed Yin's (2003) definition of case study as the one more commonly used as he is considered to be a prominent writer on the subject. Yin stated that a case study, "investigates a contemporary phenomenon within its real-life context, especially when the boundaries between the phenomenon and context are not clearly evident" (Yin, 2003:13).

Taylor (2013) expanded on Yin's (2003) definition to accentuate that it is the multiple perspectives in a case study approach that enables the investigation of complexity. He added that gathering multiple perspectives is necessary to uncover the views of others. Subsequently, Thomas (2011) recommended the use of case study methodology to explore the complex issues in health care practice from different perspectives. Predecessors of case study methodology range from varied disciplines and professions, including health and social sciences (Stake, 1995; Yin, 2003; Simons, 2009). At this point, a case study methodology seemed appropriate to explore acute care nurses use of HTPA. Yin (2003) stipulated that case study is a favoured choice when researchers are asking 'how' or 'why' questions, yet my research questions focused on asking 'what' and 'how' questions.

Furthermore, Yin (2003) urged researchers to take advantage of a case study taking place in the natural environment by undertaking direct observation. However, my intention was not to observe nurses in the clinical setting using HTPA skills. I started to consider alternative methods to gather relevant data i.e. focus groups and interviews and it was at this point that I discovered the hermeneutical circle and how it could be applied, figuratively and physically, to both focus groups and interviews. The hermeneutical circle aligned within a social constructivism paradigm, and it was at this point that I started to review the literature on the hermeneutical-dialectical methodology. Until this point, I had not read much beyond the common methodologies including phenomenology and grounded theory. I realised that even though a case study methodology was suitable for social constructivist research, the hermeneutical-dialectical methodology aligned strongly with the methods of focus groups and interviews. Furthermore, triangulation using method source (focus groups and interviews) and data source e.g. multiple perspectives of managers, educators, and nurses in varied NPs and ward nurse' roles to explore perceptions and experiences of acute care nurses use of the skills, also aligned within a social constructivist paradigm.

Being reflexive enabled me to eliminate a qualitative case study methodology as it was not as fully congruent with the aim of my study. Social constructivism aimed to 'understand and reconstruct'

and, by drawing on the broad principles of the hermeneutical circle, a hermeneutical-dialectic methodology approach was taken. For the purpose of my study the terms hermeneutical and dialectic referred to "the science, art, or technique of interpretation" (Outhwaite, 2015:785), and shared control between researcher and participants in their discussions and conversations (Lincoln and Guba, 2000). Constructivist researchers tend to rely on participants' viewpoints about the situations under investigation. In order to construct reality, a form of language is required for individuals within the social context to share information (Creswell, 2013). Language becomes the principal mode by which individuals within the social context share information, so meaning making and knowledge can be collectively constructed (Leeds-Hurwits, 2009). Both focus groups (FGs) and semi-structured individual interviews (SIIs) are conducive methods that promoted participants' discussions and conversations in sharing their views and experiences.

3.1.4 Relevance and Application of the Hermeneutical Circle

Hermeneutics is the art of interpretation whose goal is to seek understanding of texts, central to which is the notion of the hermeneutic circle involving a 'circularity' of understanding between the individual and the text. The two characteristics associated with its circularity is firstly the constant movement back and forth between the whole text and its constituted parts, and secondly, that the meaning of the text can only be found within the context in which it is situated (Schwandt, 2000). Figure 3 illustrates the concept of the hermeneutic circle and its relationship between the context and the text in developing new understanding. Schwandt (2000) held a belief that 'interpretation' attempts to understand and is therefore an inherent part of our human nature.

Interpretation can be thought of as having gained an understanding which is the result of some attempt at interpretation. If we do not arrive at any understanding, then our attempt at interpretation has not been 'successful'. Importantly in this sense interpretation is not viewed as being right or wrong, but rather whether it has moved forward and advanced our understanding. Thus, the hermeneutic circle can be seen to act as a strategy, signifying a methodological process and aiding inquiry into the human sciences (Schwandt, 1994); therefore, it was aptly fitting for my study within a social constructivism paradigm.

Figure 3: Concept of the Hermeneutic Circle (nesslabs.com/hermeneutic-circle)
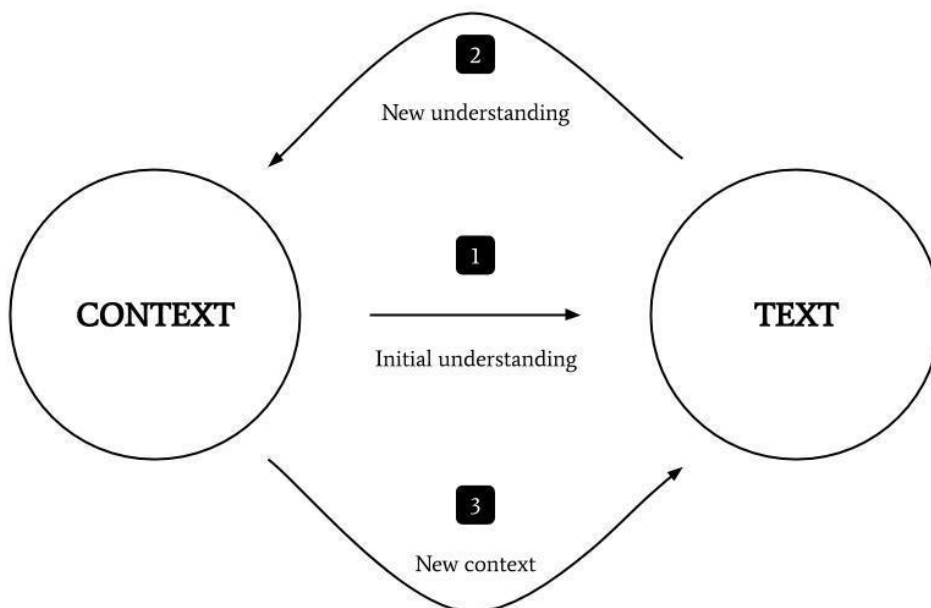
The hermeneutical circle as a methodological process is associated with two types of circles, physical and figurative. Essentially, the dialectical feature of both types of circles is their dialectical conversation (Rodwell, 1998).

3.1.5 The Physical Hermeneutical Circle

Since language is significant, and in line with a social constructivist position, a physical hermeneutical circle was used to establish a "circle of information sharing" (Rodwell, 1998: 82). It is this sharing of information that generates new and diverse insights by allowing dialectical conversations and discussions between participants and researcher. Using language as the primary mode, both FG and SSI allowed nurses and managers to articulate meanings and share both opposing or similar experiences and views. Figure 4 is illustrative of the way information flows during focus group discussions, giving participants greater control in sharing their views and experiences, compared to other methods e.g. Delphi technique. The same occurs with interviews except now the conversation is only between me (the researcher) and each individual participant, signifying a smaller circle of information sharing. Participants' discussion and conversation, captured by audio, can be transcribed into written words (verbatim text).

Figure 4: A Physical Hermeneutic Circle and Sharing of Information (Rodwell, 1998: 82)

R=respondent   I = Interviewer
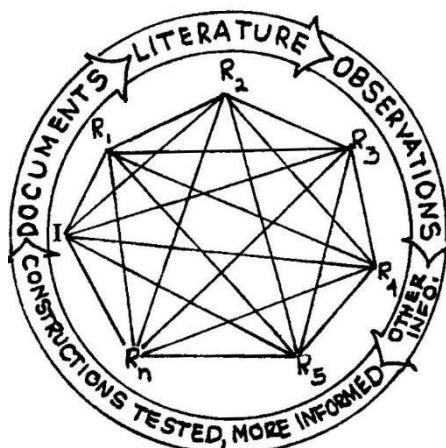
3.1.6 The Figurative Hermeneutical Circle

The figurative hermeneutical circle is applied during the process of understanding and interpreting written text (verbatim) of participants' discussions and conversations during FG and interviews. This resulted in my 'reconstruction' of new meaning (i.e. as the researcher). The figurative hermeneutical circle is applied as a methodological process as depicted in Figure 5 which is concerned with understanding of the data as 'the whole as well as its parts and vice versa' (Rodwell, 1998; Schwandt, 1994; Paterson and Higgs, 2005). This means that to make meaning of the text across the data set, one must understand a word in a sentence, and a sentence in a paragraph, and a paragraph in each interview/focus group and so on, placing each constituent part in the whole context. It is only in this way that the whole of the data can be *interpretated,* and new understanding gained.

Figure 5: Application of the Figurative Hermeneutic Circle
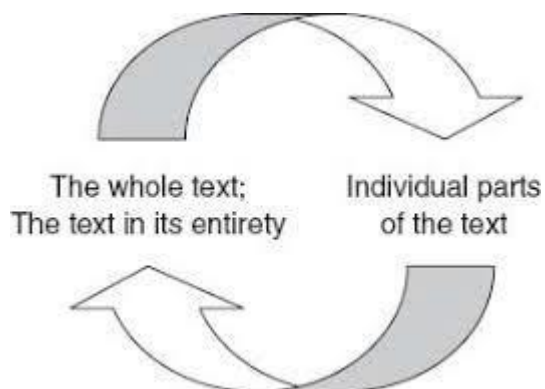
3.2 Purposive Sampling: Locations, Settings and Participants

The following details the purposive selection processes for all locations, settings and participants involved in the study. A wide range of clinical acute care areas were accessed to enable maximum variation, capturing diversity amongst participants to acquire multiple realities. By doing so, it helped shed more light on the phenomenon, 'nurses' use of HTPA skills'.

3.2.1 Selecting Locations

All four hospital sites were primarily chosen due to the convenience of their locations. Being a part-time researcher and undertaking this study whilst employed full-time as an educationalist, I had to be pragmatic in my selection of hospitals to take part in the research. Both the time and the financial constraints of travel heavily influenced my decision to choose hospitals that were nearer to where I worked. Furthermore, the sites needed to be accessed during the recruitment process and data gathering stages, and having less travel time meant it was easier to undertake these across all four sites. The hospitals were also chosen because it was known that nurses in these locations had attended some type of history taking and physical assessment training/educational course. To minimise any impact on participant recruitment, one hospital undergoing key organisational changes was identified as being more suitable to conduct a pilot study. Gaining approval to conduct the research in natural settings (hospitals) was fundamental, since understanding interactions between participants and their environment helps contextualise the interactions between participants, a central feature of social constructivism. The study received approval from Ethics Research Governance Online (ERGO) and Integrated Research Application System (IRAS).

Concurrent with the IRAS application, approval was sought from the Research and Development (R&D) NHS ethics committee for all four NHS Hospital Trusts/Foundation Trusts. IRAS and ethical approval from all four Hospitals was received, authorising the study to be conducted (see Ethics Documents in Appendix A).

For each hospital site, a nominated local collaborator, an employee within the hospital, acted as a point of contact. All local collaborators were instrumental in identifying acute care areas, facilitating networking connections and aiding logistical issues in conducting focus group discussions. Effective communication and co-operation with 'gatekeepers', whilst labour intensive, was fundamental for recruiting eligible participants. Undertaking preparatory work must be invested in, even though this took considerable time and effort (Appleton and King, 1997).

3.2.2 Focus Group and Individual Interviews

Focus groups and interviews took place at each hospital site in a variety of areas, including university or hospital education rooms, managers' offices, meeting rooms, computer rooms and a staff only coffee lounge. Generally, rooms were conducive for group discussions and ensured privacy. At one location two focus groups were conducted in a cold room which for one group might have contributed towards lack of group interaction (Goodman and Evans, 2010).

3.2.3 Selecting Adult Acute Care Settings

Acute care as highlighted in Chapter 1 is an umbrella term for numerous services providing care for patients who are ill for a short period of time both within primary and secondary care. To help define adult acute care settings within each hospital, the Intensive Care Society's (2009) guide was used to classify the level 1 of care that individual patients required as shown in Table 1 (Chapter 1). Applying this classification contributed towards maximum variation of clinical settings within level 1 care, facilitating purposive sampling by selecting similar and dissimilar care settings.

Examples of Level 1 acute care areas are surgical, medical, oncology and orthopaedics wards, as well as pre-assessment clinics and day surgery because patients in these areas may potentially be at risk of deterioration.

3.2.4 Selecting Participants

Purposive sampling was favoured to allow 'applicable' participants to be selected, that is those that have knowledge and experience of the use of HTPA skills. Therefore, participants were eligible if they met the inclusion criteria (Table 5 and 6) and were employed by one of the four hospitals. The decision to include ward nurses and nurses in varied NP roles was to capture as many views regarding nurses' use of HTPA in acute care as possible. Since nurses in varied NP and ward nurse roles might be using HTPA skills differently, capturing multiple realities was paramount, and therefore no criteria were assigned to nurses' roles or titles. Capturing multiple realities of ward nurses and NP offered alternative lenses through which to view acute care nurses use of HTPA to gain a greater understanding of nurses' use of the skills. The reason to include educational leads, as well as managers, was because some nurses are supported by their educational leads when attending educational modules rather than ward managers. Therefore, educational leads and managers were both included as they both might have the experience of supporting nurses in their use of HTPA in the clinical setting. The reality during the recruitment

process identified that most managers, especially ward managers, seemed unaware if any of their nurses had ever attended any HTPA education. Only a few managers who were aware expressed an interest in taking part in the study and hence there was a larger diversity of educational leads compared to managers. All four hospitals were having inspections from CQC which might have also contributed to managers expressing less interest in taking part. Participants were allocated into homogenous focus groups, one for nurses and the other for managers. This facilitated participants to talk more openly when sharing their views and experiences, crucial for gathering rich data.

Table 5: Inclusion and Exclusion Criteria for Acute Care Nurses

Inclusion Criteria	Exclusion Criteria
Is a registered nurse	Not a registered nurse
Involved in some aspect of patient care/intervention within an adult acute care area	Not involved in nursing care/interventions of patients in acute care areas.
Attended any formal type of training/programme/educational history taking and physical assessment course.	Learnt skills informally from colleagues which may mean that the underpinning knowledge in the use of these skills is lacking.
Achieved a pass grade/award for any history taking and physical assessment training/course that contained a summative assessment.	Did not achieve a pass award for any history taking and physical assessment programme or module that contained a summative assessment.

Table 6: Inclusion and Exclusion Criteria for Acute Care Managers

Inclusion Criteria	Exclusion Criteria
Manager/educational lead of an acute care area.	Manager of a non-acute clinical area
Nurses/practitioners in their clinical area use history taking and physical assessment skills in some aspect of patient care.	Nurses/practitioners in their clinical area do not use history taking and physical assessment skills in some aspect of their patient care.

3.2.5 Recruitment of Acute Care Managers

Managers' details were provided by each hospital's nominated collaborator. Invitation letters, information sheets and consent forms (Appendix A) enclosed in envelopes were delivered in

person, sometimes accompanied by the hospital's local collaborator to assist with initial introductions. This provided me with the opportunity to liaise, where possible, directly with managers so they could ask questions about the study. This augmented networking processes as managers started to recognise me when I visited their sites, and aided the recruitment processes as it seemed managers were then more likely to inform their nurses about my study. Nevertheless, recruitment was challenging, primarily due to hospitals being audited by the Care Quality Commission (CQC), daily staffing and work pressures, as well as recruitment unavoidably (due to my own constraints) coinciding with main annual leave periods. At some locations, managers recognised me from the first visit, either in my current educational role or from my clinical practice days; this facilitated networking with other managers.

Envelopes were prepared containing nurse invitation letters, information sheets and consent forms.Managers disseminated the information to nurses who they felt met the inclusion criteria via their 'pigeonholes'. Permission was also obtained to display posters (Appendix A) and leave batches of envelopes in staff only areas, meaning other nurses could access information about the study independently. Managers interested in taking part in the study themselves either initiated contact via email/telephone or liaised with me directly during my site visits. Nurses and managers also verbally informed colleagues about the study who contacted me if they were interested in taking part. Some participants were not eligible and understood this when I explained why I had to decline their offer to take part. After focus group discussions, participants interested in attending stage 2 consented to being contacted.

3.2.6 Participants Demographic Details

Stage 1 (focus groups) lasted five months, including site visits, recruitment and focus group sessions. Participants' role descriptions and demographic details are detailed in Chapter 4. A total of 34 participants were involved in the study. Nineteen nurses and 15 managers took part in the focus groups lasting approximately 45 minutes across four hospital sites. One nurse, unable to attend a focus group session due to work commitments, attended an individual interview in Stage 2. Initially for the individual interviews I planned to purposively select focus group' participants who might offer further information shared during group discussions. After completing all focus groups, I decided to invite all 20 participants who had initially consented in case any participant decided to change their mind and withdraw. Interviews lasted on average about 50 minutes.

3.2.7 Pilot Study

A pilot study (Site 1) was used to pilot both the focus group discussion topic guide and interview

questions (Appendix B). The advantages of the pilot study were two-fold. Firstly, it acted as a trial run of the recruitment processes thus allowing minor recruitment adjustments to be made such as liaising with managers to ascertain nurses' lunch/break times and re-positioning of posters to more visible places (in staff only areas). Secondly, it allowed the opportunity to review and amend any ambiguous topic questions if needed prior to continuing the study at the other sites. The focus group topic guide was shaped by the literature review to focus on factors that influenced nurses' use of the skills, changes to nursing practice, and the perceived impact on patient care. Questions were worded neutrally and open ended to generate discussion and minimise the risk of response bias. To gauge the type of responses and enable any amendments before undertaking the pilot focus groups, I asked work colleagues and supervisors to review the questions. After completing the pilot focus groups there were no ambiguities noted so there was no need to make any amendments to the topic guide which was used for the focus groups across the three main hospital sites. All focus groups were completed prior to commencing stage 2 (interviews).

The individual interview questions were derived from the initial data analysis of the focus groups. This was challenging as I found it difficult at times to concentrate on developing the interview questions in conjunction with undertaking the initial analysis process. Supervisory sessions were also constructive in the development of interview questions. After the pilot interview the word 'could' was changed to 'might' on the final interview question, which did not alter the meaning of the question evidenced by subsequent participants' appropriate responses. Once all the data i.e. focus groups and interviews across all four sites (pilot and main) had been completed, transcribed, and initial codes generated I could see that similarities and differences were emerging from the data across the pilot and main study sites. For this reason, I decided to include all the pilot group data in with the data from the three main hospital sites to capture as much rich data as possible, before undertaking the next stage of analysis. Therefore, information from all individual interviews and focus group discussions were included in the final data analysis of the study.

3.3 Methods

This section details the methods undertaken in this study to elicit the desired information from participants involved in the study. Figure 6 outlines the two stages of the study which allowed time between focus groups and the interviews. This meant that some preliminary analysis of the focus groups was undertaken and enabled me to develop the interview guide.

Figure 6: Sequence for the Two Stage Method of Data Collection at each Hospital Site involved in the Study
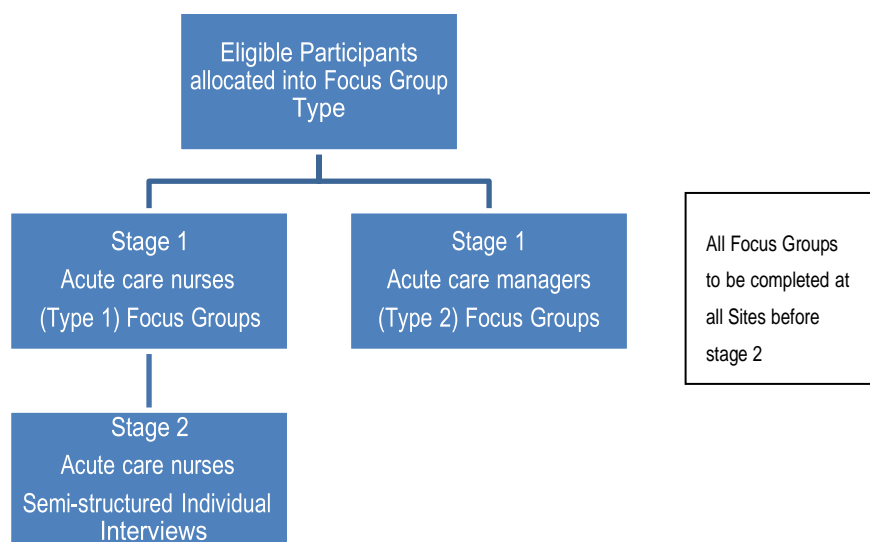
3.3.1 Triangulation: Data Source and Method

Triangulation is the use of more than one approach to explore a research question and can be applied in varied ways depending on the nature of the research. The combination of multiple approaches can be used to increase the confidence of the findings (Heale and Forbes, 2013). Two triangulation techniques appropriate for this study were data source and data method. The purpose of triangulation in my study was used to create a more in-depth picture of the research aim and by using different ways to gain more insight into the findings that emerged of nurses' use of HTPA skills. Employing appropriate triangulation techniques allowed different insights to be revealed. Data source involved gathering data from two participant groups (Thomas, 2011), one consisting of acute care nurses and the other consisting of acute care managers. Acute care nurses were the principal group of participants because they are nurses who had been taught HTPA skills. Even though not all acute care nurses might be using HTPA skills, their views and experiences allowed multiple realities to be uncovered. Furthermore, as managers are usually responsible for selecting nurses who attend HTPA educational/training modules, this meant that they, too, had some familiarity with nurses' use of these skills in adult acute care settings and why managers were included in my study.

The research strategy enabled data to be gathered using different methods i.e. focus groups and interviews (Thomas, 2011). Constructivist researchers tend to rely on participants' viewpoints about the situations under investigation (Creswell, 2013), meaning that it is through the

interaction between myself (researcher), nurses, and managers (participants) that 'knowledge' or understanding of nurses' experiences and perceptions using HTPA skills can be elicited, interpreted, and constructed (Guba and Lincoln, 1994). For this reason, and in keeping with a hermeneutical and dialectic methodology, focus groups (FGs) and individual semi-structured interviews (SSIs) were both appropriate types of 'interview-based' methods to gather data in this study. Due to the ongoing iterative process of this study, the data collection was undertaken in two stages and the duration of data collection across all four hospital sites took place over a five-month period in 2018 as shown in Table 7. The number of FGs and SSI conducted each week is presented in each coloured box (Table 7). Due to peak annual leave times occurring over the month of August, it took longer to schedule convenient dates/times for FGs which occurred over a seven-week duration for managers and a three-week duration for nurses. Semi-structured nurse interviews, including the pilot interview, took place over a period of 10 weeks.

Table 7: Duration of Data Collection across all Four Hospital Sites involved in the Study

Month	July			August				Sept					Oct				Nov				Dec
W/C	15	22	29	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	3
Data Collection Activity																					
Pilot Manager FG	1																				
Pilot Nurse FG		1																			
Pilot Nurse SSI												1									
3 Manager FGs			1					1	1												
4 Nurse FGs							1	2	1												
12 Nurse SSIs													3	2	2	2	1			1	1

Therefore, the aim of using both data source and method triangulation techniques was to capture multiple realities to reveal participants' converging and diverging perspectives.

3.3.2 Development of FG and SSI guide

Whilst FG and SSIs share similarities their purposes in this study were different (detailed below more fully) and this resulted in two stages for gathering data. The topic guide for the focus group was developed from evidence extracted in the literature reviewed and taking my own knowledge and experience into account, as both educator and nurse. The guide focused on changes to nursing practice, impact on patient care and factors influencing nurses' use of HTPA skills. Initial FG data, along with supervisory sessions, began to shape the individual interview guide. Work colleagues were used to trial the wording of questions before final structuring and formatting of

questions. A pilot of both FG and individual interview offered opportunity to amend any ambiguous questions (section 3.2.7. Pilot Study). Timewise, there was a fine balance between developing questions to elicit the desired information and dates set for the interviews.

3.3.3 Focus Groups

Focus groups (FG) are conducive to generating large amounts of information in shorter timeframes and elicit 'new' or 'unknown' concepts amongst group members which might otherwise not be revealed (Goodman and Evans 2010). FGs enabled participants to share and express both commonalities and diversities, allowing multiple realities to be captured. FGs facilitate the use of the group's dynamics and interactions, both of which are fundamental to transactionalism, and they generate group discussion. It is through the group's discussion that information is more likely to be revealed on what, how and why nurses think the way they do (Kitzinger, 1995; Krueger, 1994) about nurses' use of HTPA skills. Therefore, FG were used to gather a breadth of participants' views, experiences and opinions. Mindful that FG discussions can be impacted by dominant or hierarchical group members, potentially creating tensions or inhibitions between participants, I decided it was appropriate to use homogeneous focus groups, one for managers and the other for nurses (Kitzinger, 1994; Goodman and Evans, 2010).

When employing a physical hermeneutical circle, participants in focus groups have greater control in the information they wish to share with others. This made my role as the FG moderator vital in facilitating interaction between participants, whilst keeping the group's discussion focused (Krueger, 1994; Kitzinger, 1995). Despite group discussions occasionally drifting, this did not distract from the essence of the topic guide.

An optimal number of participants in focus groups continually causes debate. Goodman and Evans (2010) advocated selecting between 5-12 participants whilst Krueger and Casey (2000) recommended that smaller numbers of 6-8 have the greatest potential to generate information. A total of nine focus group (including two pilot groups) across all four sites were completed, five with nurses and four with managers. The number of participants in each group varied between three and five people. Whilst this number of participants is smaller than advocated, researchers are advised to consider the amount of information that participants might have to offer. Smaller groups are deemed suitable especially when participants are interested or more knowledgeable on the topic to be discussed (Morgan, 2013), such as the nurses and managers in my study. Therefore, a minimum of three participants was considered to be an acceptable number.

Despite participants attending focus groups in their own time, due to the nature of nursing and

the priority of patient care, participants could not guarantee their attendance. To compensate for potential non-attenders, over recruiting the number of participants (Rabiee, 2004) was attempted but proved challenging. In an effort to increase attendance, individuals who had signed up for a focus group were sent reminders via texts and emails the day before the event.

To minimise interruptions, an 'interview in progress' sign was placed on the outer side of the door. A focus group topic guide, explained previously, was used to accommodate each group's individual dynamics and enhance group discussion. The order, sequence and exact wording of questions varied in their delivery. Focus groups were advantageous for group dynamics, as they promoted a synergy between participants who freely exchanged and shared information yielding deep, rich data (Kitzinger, 1995; Thomas et al, 1995). Predominantly focus group participants had stimulating discussions concentrating on factors hindering and aiding nurses' use of HTPA, how their nursing practice had changed and the impact on patient care. Appropriate humour was demonstrated in some FGs, particularly when a participant recounted their experience of developing their use of HTPA skills. Researchers have noted that humour can serve to establish solidarity among focus group participants (Wilkinson et al., 2007). No one voice among participants was noted as dominating or interrupting discussions. Very occasionally if a participant paused for a long time (few seconds), another participant would pick up on the topic of conversation. All participants actively engaged throughout the sessions, revealing similarities and differences in their experiences and views.

Generally, room settings were conducive for group discussions. At one location two focus groups were conducted in a cold room which for one group might have contributed towards the lack of group interaction in that group (Goodman and Evans, 2010) as their discussion only lasted about 20 minutes. Reflecting on the lack of interaction of this FG, on arrival at the location I was informed the educational room had been double booked and was no longer available. A small computer room was offered as an alternative venue. I felt reluctant to cancel the FG because participants were attending during their lunchbreak, and I only had a short time to decide whether to go ahead with the session before the participants would start to arrive for the FG. This meant there was insufficient time for me to assess the conditions of the computer room's environment. Due to the limited size of the room and the position of the computers the only space feasible to place the chairs was directly beneath the air conditioning vents. Despite it being a hot sunny day, after about 10 minutes everyone (myself included) had all commented on the 'coldness' of the room and participants were noted to rub their arms and/or shiver during the remainder of the session. Probably due to the weather, participants had not brought sweaters or

other clothing with them which would have helped them keep warm. For this reason, I suspected the temperature of the room largely contributed for the shorter duration (about 20 minutes) of this FG, unlike the other FGs which had lasted around 45-50 minutes. In hindsight, I would have contacted the organisation the day before to confirm there were no issues with the original room booking as potentially this could have given me additional time to find a more appropriate alternative setting. Equally, had I arrived earlier at the venue, I could have assessed the environment of the computer room fully and messaged participants alerting them to the temperature so they could bring additional clothing to keep warm.

Participants were informed that I might occasionally make notes. As there was not an additional note taker, FG discussions were recorded enabling discussions to be transcribed verbatim and assisting with reflexive notations. Reflexive notes, a continual process, aided consideration of my own influences and biases, increasing the transparency and credibility of the findings (Finlay, 2002). Notes were taken during focus groups and added to afterwards as soon as participants had left the room. Muswazi and Nhamo (2013) referred to this as field notes, encouraging researchers to write a descriptive picture of participants' observed behaviour. Writing from memory about the environment and conversation helped me to internalize what occurred during focus groups and note taking aided further internalization throughout the research. Thus, field notes are individual and unique, enabling researchers to identify information that might be important or form ideas and questions to facilitate analysis (Saunders et al., 2003).

Nonetheless, there are potential issues with taking field notes during focus groups as it can cause participants to feel uncomfortable and prevent them from sharing information. To minimise distracting participants during focus groups, taking notes was minimal, and tended to be the odd word on the interaction between individuals when another participant was talking that appeared to disagree with the information shared; this prompted me to ask other participants if their views and experiences differed. The main drawback of making additional notes after the focus groups is recall bias, as I may have overlooked or forgotten important details so that the information is less accurate which could contribute towards a less meaningful analysis of the data. Hence, to minimise this risk, I ensured this was completed as soon as possible after the focus groups.

Once my initial nerves had settled, I enjoyed facilitating the focus groups due to my greater familiarity with group discussions as part of my educational role. Towards the end of each FG, I provided a brief verbal summary to FG participants of key themes they had discussed. This gave participants an opportunity to reflect on the key points discussed and provide further insights into

them. In such a way, these members' reflections helped aid the credibility of the findings (Tracy, 2010). Member reflections are further discussed later in this chapter.

On completion of the session, participants were given time to debrief and often asked if what they had talked about was helpful. Once participants had left the room, I reviewed my initial notes and added as much detail as possible, who had sat where, description of laughter, facial movements, gestures, hand movements, etc., and these subtle details added to the context and assisted in the meaning making process.

3.3.4 Individual Interviews

When smaller qualitative studies, like this research, are being undertaken it is suggested that a range of 15-30 individual interviews are needed for thematic saturation of data to be reached (Guest et al, 2006). Nevertheless, this number range is based upon individual interviews being conducted first or not coupled with any other type of interview method, like FGs. Initially up to 15 interviews was deemed appropriate for data saturation to be attained. After recruitment 20 nurse participants consented to take part in stage 2. I decided to invite them as it was unlikely that all would be able to follow through with the individual interviews, and, indeed, only 13 participants took up this offer. Four participants provided dates/times when they were available which unfortunately conflicted with prior individual interviews at different locations. Three participants sent no response, and therefore I surmised that this was them not wanting to continue to take part and so no further contact was attempted.

Although interviews can be unstructured or semi structured. Semi-structured interviews (SSI) provided guidance and prompts with questions, helping to maintain the conversation between myself and the participant (Grix, 2010; Gerrish and Lathlean, 2015). By utilising an interview topic guide with fixed pre-prepared open questions, consistency was maintained during the interview with each participant (Fossey et al., 2002). Another advantage of using SSI is the flexibility in the flow of the conversation between interviewee and interviewer (DeJonckheere and Vaughn, 2018) which is conducive for extracting more detailed information and builds on the FG data (Fossey et al., 2002). Drawing on the physical hermeneutical circle by using dyadic communications meant that, as the researcher, I could explore in more depth key issues raised during the focus groups, helping to illuminate the issues to deepen comprehension. Thus, the added value of in-depth interviews, unlike focus groups, was focusing more deeply on key aspects. On the whole, interviewees seemed relaxed and keen to share their views and experiences. After each interview

all participants were eager to talk more generally about their working environment and organisational issues. Interviews were audio recorded to aid accuracy of transcription. Reflexive notes were made as soon after the interview once the participant had left. Timewise there was a fine balance between developing questions to elicit the desired information and dates set for follow up interviews with nurses. More crucially, I was apprehensive that these initial findings from the focus groups which formed the foundation of the interview questions might not aid further illumination of key areas.

There were two benefits to conducting individual interviews after the focus group discussions. To begin with it allowed time for initial data analysis of the focus groups which was used to design the interview questions. Then, later on, having previously met and engaged with participants during their focus group, there was an instant rapport which facilitated and aided the conversation throughout the interview. In terms of time, there was a fine balance between developing questions to elicit the desired information and dates set for the interviews.

3.4 Ethical Considerations

Information expressed clearly on information sheets and invitation letters enabled participants to be fully informed before deciding to take part. It was especially important to identify in the focus group participant' recruitment letters the possibility that individuals may know other participants, allowing them the opportunity of not taking part should they decide this was an issue for them. Written consent was obtained from participants prior to both focus groups and individual interviews ensuring consent, voluntary and willing, remained an ongoing activity throughout the research. This was important and helped ensure organisational gatekeepers, such as Directors of Nursing and ward managers who were in positions of authority, did not coerce participants to take part (Holloway and Wheeler, 2002). Participants were made aware of their rights to withdraw from the study at any time whilst understanding that, due to the nature of focus groups, any data recorded could not be extracted. Similarly, participants' individual interview data once coded could not be removed. Participants were reminded prior to focus groups and individual interviews not to refer to their patients or colleagues (not present) by their names to maintain confidentiality. Furthermore, focus group participants were asked to keep information shared during focus groups confidential, although it was not possible to guarantee absolute confidentiality. To encourage participants not to talk about information discussed during their focus groups, time was provided for participants to chat more informally after the session which acted as an informal debrief. No suboptimal patient care was identified or discussed by

participants during focus groups or individual interviews. Participants were aware that findings using verbatim extracts would be used to present the findings. However, to minimise individuals being identifiable to those that know them, where necessary participants' relevant details were disguised such as age and gender to maintain their confidentiality.

3.5 Data Handling and Storage

It was important to clarify with participants that only I, as the chief investigator, had access to the information and raw data collected from the study to ensure confidentiality of individual participants is maintained. Maintaining confidentiality can aid with issues of participants' and hospital sites' anonymity. Data were stored on a password protected computer.

3.6 Criteria for ensuring Rigour

To assess the rigour (quality) of qualitative research Lincoln and Guba (1985) referred to the concept of trustworthiness which is related to four essential dimensions: confirmability, dependability, transferability and credibility. Applying this set of criteria to my own study assisted in attaining good quality research. It is important when designing the methodology of this study to provide an account of how these dimensions will be applied to this particular study (Denzin, 1989; Robson, 2002).

3.6.1 Dependability and Confirmability

In order to demonstrate dependability an explicit account of the methodology and data must be evident (Polit and Beck, 2008), as I have detailed in this chapter. The dependability of the study was achieved by describing the methodological and analytical processes in this chapter and chapter 4. Illustrative participant' excerpts provided an audit trail, and aided the transparency of the data for others to view so that they could repeat this work. Note taking also formed part of my audit trail and helped to shape and inform the initial and subsequent analysis. It is important to emphasise that any repetition of this study is not likely to produce the same results, as that is not the intent within a social constructivist paradigm. Fundamentally the dependability of this study is to enable the replication of the same key methodological and analytical processes to take place.

3.6.2 Credibility

Credibility is generally considered the most important of the four criteria as it relates to how

'fitting' the findings are with reality (Lincoln and Guba, 1985; Merriam, 1998). Or put more simply, to find out if the findings represent a believable interpretation of information founded on participants' original data (Korstjens and Moser, 2018). Critics of qualitative research stress that the nature of subjectivity makes this difficult; conversely for researchers employing a qualitative approach it is this very subjectivity that is a fundamental feature of social constructivism. Credibility was maintained using several techniques: prolonged engagement, examining previous research findings, thick description of the phenomenon, member reflections, qualifications and experience of investigator, reflexivity, peer scrutiny, debriefing sessions, and triangulation (Shenton, 2004).

Prolonged engagement at hospital sites was achieved during pre-site visits, FG discussions, and interviews which provided opportunities to build rapport and trust with participants. Over the five months of data collection, I became familiar with the data. Reflexivity through the use of a journal diary helped me to detail my thoughts by writing them down and later these acted as a record to go back to, helping to eliminate bias.

Member checking is a technique aimed at establishing the credibility of the findings and is regarded as the 'gold standard' of quality in qualitative research (Madill and Sullivan, 2018). However, Carlson (2010) stressed that greater focus is placed on 'should-do's' rather than more guidance on 'must-do's', suggesting that there may be less consensus in the literature. Member checking usually requires participants to confirm that the information shared has been captured accurately, and a common way for this to occur is by participants reading the transcript of their focus groups and interview. This approach has received criticism for taking place quite sometime after participants' interviews as transcription has to be completed (Carlson, 2010). This suggests that the timing of member checking is considered out of context in relation to the situation in which the interview took place. As a result, participants' recall of focus groups and interviews might differ from the transcription, which in their raw state might make participants feel uncomfortable e.g. they might be aware of poor grammar, potentially influencing their decision to withdraw from a study. Reading transcriptions also requires more of the participants' time. Perhaps more fundamentally, as Braun and Clarke (2023) have noted, the notion of member checking is at odds with a constructivist paradigm. For example, it assumes that there is 'one true reality' to participants' experiences which the research can 'get right'. For all of these reasons, I adopted an approach which instead of 'member checking' focused on 'member reflections'. This involved providing a brief summary to participants of what was discussed, allowing them to reflect upon my summary and then contribute further insights into my summary of the

information they shared. Tracy (2010:844) suggested that this approach aids credibility not as a "test of research findings" but rather as an "opportunity for collaboration and reflexive elaboration".

Peer debriefing and scrutiny with supervisors during supervisory sessions created opportunities for questions and answers relating to the data (Polit and Beck, 2008). Supervisory sessions encouraged me to 'think aloud' by sharing information. It also meant I could demonstrate and convey my 'subjective' constructed knowledge during supervisory sessions and relate these to previous studies. This was crucial in supervisory discussions to determine how findings from this study fitted with findings from previous studies (Shenton, 2004). Supervisory sessions also enabled findings to be shared and enabled supervisors to aid in confirming findings derived from the data. This was highly valuable, as being a novice researcher, I had originally created a conceptual representation of the initial themes and codes (Appendix D). During supervision, my supervisors questioned some of these themes, and it was at this point that I realised my initial analysis was too superficial. Revisiting the data to further immerse myself enabled me to take my analysis to new depths. Additionally, reviewing the conceptual representation (Appendix D) enabled me to make deeper connections between the data, for instance, nurses' workforce pressures developed into the subtheme "nurses acting as firefighters and gap-fillers''.

Due to the nature of this qualitative study inter-rater reliability is not recognised by Braun and Clarke (2019) as part of their thematic analysis approach. Nonetheless, as a novice researcher I was aware of the importance of aiding the credibility of the findings. Thus, peer scrutiny of transcriptions was independently undertaken by one of my supervisors, who reviewed transcriptions from across the data set, not to compare my analysis of the transcripts with their analysis but more to ensure that my analysis had originated from within the raw data.

Confirmability is an important feature to minimize researcher bias e.g. reflexivity and transparency in my decision-making. Reflexivity through the use of a journal diary helped me to detail my thoughts in writing and acted as a record to go back to, thus helping to eliminate bias. Reflexivity and reflection are sometimes used synonymously, yet reflexivity moves beyond reflection on 'your practice', taking up what Cousins (2013) referred to as a 'positionality' stance. Cousins (2013) alluded to positionality as questions one should ask oneself to move beyond merely reflecting on what one did. For example, how did I come to that meaning? What do I mean by that term? Such questions should foster the researcher's reflexivity. One example of reflexivity concerned the elimination of case study methodology, as discussed previously, for this study.

However, thinking reflexively about observing acute care nurses in clinical practice, I started to consider various ethical issues such as any potential risks concerned with witnessing nurses performing skills incorrectly, or any suboptimal care. Equally, as an educationalist, I was aware that not all students feel comfortable with being observed in the classroom practising the skills; therefore, it was unlikely that nurses would consent to be observed in clinical practice, as well as ethical issues in obtaining consent from the hospital patients. Furthermore, I was uncertain about what I would actually want to observe nurses for, and where any observations would take place. Given the complexities and challenges surrounding these issues, I decided to consider what other methodologies would be appropriate to gather the relevant data about nurses' and managers' experiences and views of nurses' use of the skills. It was at this particular point that focus groups and interviews were deemed most appropriate and, reading more widely, I developed an interest in the significance of the hermeneutical circle, both figuratively and physically (as discussed earlier). Furthermore, the hermeneutical-dialectical methodology was strongly evident in the iterative processes of the thematic data analysis and aligned more fully within a social constructivist paradigm. Thus, it was thinking reflexively that enabled me to come to this decision to adopt a hermeneutical-dialectic methodology instead of a case study methodology. Due to being a novice researcher, I had prior awareness and familiarity with case study methodology and so initially adopted it. Reflexivity enabled me to be confident and re-evaluate this study's methodology, resulting in the selection of a hermeneutical-dialectic methodology.

As both an educationalist teaching HTPA and a registrant with clinical experience in adult acute care, I am well positioned to explore acute care nurses' use of HTPA. I have familiarity with the environment in which nurses work which means my subjective interpretation, drawing on the application of the hermeneutical circle (see section 3.1.4), aimed to advance an understanding of nurses' use of HTPA. Whilst there is criticism within the scientific community for such subjectively, it is my in-depth knowledge as an educationalist teaching HTPA skills that makes me well qualified on this topic (Shenton, 2004; Polit and Beck, 2008). Having an understanding during the discussion and interviews when nurses and managers used abbreviations or colloquial terms was beneficial, although I was aware participants might not expand on information due to any preconceived assumptions of my knowledge. Where necessary I asked participants to expand on the information given to counteract any of their assumptions. Social constructivism also asserts reflexivity in understanding and meaning making, aiming to reconstruct the 'world' at the point in which it is created in the mind of its constructor (Rodwell, 1998). Hence my own position as a researcher and educationalist combined with my prior experiences of nursing in acute care make my contributions unique, in consciously bringing together meanings that are assembled in my

own account to reveal new constructions.

As field notes were kept to a minimum during focus groups and interviews, tape recording all sessions helped to reduce errors and accurately captured participants' words. Likewise, triangulation in my study was to draw on techniques to gain an in-depth picture of nurses' use of HTPA skills. Employing appropriate triangulation techniques allowed different insights to be revealed.

3.6.3 Transferability

Transferability refers to the degree to which results might be applicable to those working in similar settings (Korstjens and Moser, 2018). As qualitative research is subjective, Morse and Field (1995) stipulated that it is for the readers themselves to determine how transferable the findings are to their own settings. This view was shared by Taylor (2013) who stressed that findings of well written studies enable others to determine how applicable findings might be to their own circumstances.This is only achievable by making accessible a comprehensive detailed account of the phenomenon being studied, so that readers can make that decision (Shenton, 2004). As the researcher, it is my responsibility to present my analysis of the findings, offering a rich description of the context and drawing on participants' excerpts to aid transparency. The use of themes in data analysis can also make it easier for readers to follow the 'story' in the findings. It is anticipated that the findings from this study will provide readers from similar settings, including managers and nurses, insight into the use of history taking and physical assessment skills in acute care environments. Although the intent of this study was not focused on education, it is likely that there should be findings conducive for educationalists. This is not only for those already delivering courses for registered nurses, but also those involved in undergraduate students, especially in view of HTPA skills being integrated into the UKs' undergraduate nursing curriculums.

3.7 Data Analysis

This section outlines the processes undertaken in transcribing and analysing all the data, both focus group discussions and individual interviews. During this process, as the researcher, I became the primary source for data analysis (Starks and Trinidad, 2007), responsible for ensuring a rigorous approach continues to be maintained. Qualitative data analysis can be complex and daunting for novice researchers, such as myself, because often data collection and analysis take place simultaneously (Thorne, 2000). Despite this, Nowell et al. (2017) encouraged researchers to disclose their approach step-by-step to share greater transparency with others.

3.7.1 Rationale for Thematic Analysis

According to Bennett et al. (2019) most approaches to the analysis of qualitative data share key characteristics, namely familiarize with the data, code the data, combine codes, and generate themes. This implies that on the surface there appears to be little difference between different qualitative approaches. Initially drawn to thematic analysis (TA) as suited for novice researchers, consideration was given to other approaches, in particular Ritchie and Spencer's (1994) Framework method. Ritchie and Spencer's approach is deemed flexible; it generates themes, and is not aligned to any particular epistemological or theoretical approach. Framework Analysis is unique in forming series of matrices so researchers can analyse data at varying levels (codes/themes), without losing sight of the raw data, benefitting the transparency during data analysis. The downside of using this approach is it advocates at least two people (minimum) code the data because the analysis across varying levels can be more complex for novice researchers (Kiernan and Hill, 2018), such as myself. Furthermore, Braun and Clarke (2019) argue that multiple coders acting as inter-rater reliability is underpinned by the positivist paradigm rather than a social constructivist paradigm.

For these reasons, I chose Braun and Clarke's (2006) thematic analysis (TA), seen as versatile in addressing a diverse range of research questions, including people's experiences and perceptions, as in my study. Most importantly, Braun and Clarke's (2006) widely used TA aligns within a social constructivism paradigm and is conducive for novice researchers in embedding important core skills fundamental in the process of identifying themes and patterns (Braun and Clarke, 2006). Maguire and Delahunt (2017) indicated that Braun and Clarke's (2006) approach to thematic analysis is the most widely used by researchers due to its structured approach. Arguably, Braun and Clarke's portrayal of exemplars facilitates novice researchers' understanding of the data analysis process thus making it most influentially in its use.

3.7.2 Transcription of Data

After each FG or interview, each audio recording was stored onto a password protected computer as an audio file. Once stored, participants' names were deleted and replaced with a unique identifier code only accessible by myself. I transcribed all focus groups and individual interviews, using commas and full stops as Braun and Clarke advise, keeping the transcript in context when working with the data during the early stages to ensure detail does not become lost. Transcription was aided by using the Olympus AS- 5000 transcription kit and foot pedal and after the first couple of focus groups my familiarity with the equipment had increased so I was adept at using

the equipment by the time I transcribed the interviews. Nonetheless there was one focus group whereby, in a couple of places, the complete transcription was unobtainable due to interference and inaudible dialogue. Even though I tried re-listening by slowing the playback speed I was unable to determine two words. On average, transcription of FG took around five hours and interviews averaged around two hours, yet the reward of immersion with the data was invaluable in aiding coding as I could visualize the participants' actions and expressions when reading the verbatim text.

To aid credibility of the research findings it was first necessary to draw upon relevant exemplars throughout the process of data analysis. This assisted with demonstrating the original data is an accurate interpretation of participants' views and is therefore an audit trail of the data analysis process (Korstjens and Moser, 2018).

I decided to code manually rather than using any software programme. This was partly due to time constraints in learning how to use any computer package, but more importantly down to my personal preference in the style of engagement offered by manual coding which gave me a deeper sense of being able to connect with the data.

Braun and Clarke's (2019) thematic analysis is an umbrella term due to its ability to be used in different approaches to coding and generating themes; the themes are described as 'reflecting a pattern of shared meaning' (2019: 845). Unlike deductive approaches, an inductive one allowed an analytical process to begin from the data by identifying meaning that was not linked to any pre-set ideas. Although this approach takes longer, it offers the opportunity to capture meanings that might otherwise have been excluded by using a deductive approach (Braun and Clarke, 2006). The six stages were followed as described below in Table 8.

Thematic analysis was undertaken alongside the implementation of the hermeneutical circle as a process to aid the interpretation of transcribed data (verbatim text).

Table 8: Identification of Stages and Procedures for Thematic Analysis of Data. (Braun & Clarke, p35, Table 3)

Phase of Thematic Analysis	Procedure
Phase 1: Familiarizing yourself with the data	Transcribing data (if necessary), reading and rereading the data, noting down initial ideas.
Phase 2: Generating initial codes	Coding interesting features of the data in a systematic fashion across the entire data set, collating data relevant to each code.
Phase 3: Search for themes	Collating codes into potential themes, gathering all data relevant to each potential theme.
Phase 4: Review themes	Checking in the themes work in relation to the coded extracts (Level 1) and the entire data set (Level 2), generating a thematic 'map' of the analysis.
Phase 5: Define and name themes	Ongoing analysis to refine the specifics of each theme, and the overall story the analysis tells; generating clear definitions and names for each theme.
Phase 6: Produce a narrative report	The final opportunity for analysis. Selection of vivid, compelling extract examples, final analysis of selected extracts, relating back of the analysis to the research question and literature, producing a scholarly report of the analysis.

3.7.2.1 Phase 1. Familiarizing yourself with the data:

Reviewing my prior reflexive notes which contained my analytical thoughts, ideas, and impressions of FGs and interviews, meant I had already started to become familiar with the data (Nowell et al., 2017). This was enriched further, as I grew more acquainted with the data by transcribing both focus group and individual interview data. Whilst transcription was immensely time consuming, it was invaluable in aiding me to immerse myself as much as possible into the data as well as repeatedly reading the transcripts, actively making notations on the transcripts and in my reflexive diary (where prior notations had been made). For Braun and Clarke (2006) immersion is crucial in advancing familiarization with both depth and breadth of the content. I started to get a general sense of the data and considered possible meanings by identifying patterns, similarities, and differences. For example, the 'bigger picture' was a pattern identified in the data that seemed to convey to me that nurses perceived their knowledge of HTPA increased their awareness of possible negative patient outcomes/consequences.

3.7.2.2 Phase 2. Generating initial codes:

Once I felt familiar with the data, initial codes (semantic or latent) were generated by distinguishing features of the data that were of interest in addressing the research questions (Braun and Clarke, 2006). Semantic codes reflect the exact content of the data, whereas latent codes capture assumptions underpinning the data. According to Braun and Clarke (2006) codes can be latent or semantic depending on whether the meaning making (interpretation) of the data is aimed at a descriptive (semantic) or analytical (latent) level. Significantly this phase required a structured process, replicable across the complete data set. Taking each transcript, I worked systematically through the data, reviewing notes and created a coding framework to help organize the codes generated. Using an inductive approach resulted in generating lots of information, though not all codes appeared of interest in this study e.g. content delivered in HTPA modules. Nonetheless, as advised by Braun and Clarke (2006) it was too early in the analysis process to ignore or discard any codes. Table 9 depicts a coded excerpt (to aid legibility) from one of the nurse focus groups [NFG1].

Table 9: Verbatim text transcribed from NFG1 and codes identified

Verbatim text	Code
You have to be very careful, think very carefully because I've seen numbers of job descriptions saying they want you to have physical examination skills but then you don't get opportunity to use them (long pause) and therefore does it, is it a requirement of the job or is it just an aspiration that everybody should have physical and therefore nobody makes use of it, and that's what's happened in my experience, I don't get opportunity to do that in A&E because I've not done a practitioners course, I did a PGCE in emergency care and clinical examination skills but I never had the opportunity to further it on	Caution/take care Mismatch of job description v. role Ambitions/hopes Restricted in use? frustrated Course not good enough/accepted.

Table 10 is a typed copy of my reflexive notes after coding the section illustrated in the Table (9) above. This seemed important to these nurses who appeared to feel frustrated regarding the use of HTPA within their organizations, creating possible tension and conflict. Regular peer debriefing during supervisory sessions allowed me to share initial codes and thoughts about the data, facilitating deeper engagement with the data (Nowell et al., 2017).

Table 10: Reflexive notes following coding of focus group NFG1

Typed copy of notes after coding	*Nurses seemed frustrated with organisational conflict. There seems to be a mismatch regarding job descriptions and role – where has this confusion appeared? Are organisations stipulating certain prerequisites like HTPA, prescribing etc because they are part of NMC's requirements for advanced nurse practitioners who are band7s/8s and by association applying those same prerequisites to wardmanager or sister because they are also band 7s/8?? – interesting that they called them the GUCCI SKILLS! implying they are different roles have different needs – they recognise this*

3.7.2.3 Phase 3. Searching for themes:

The search for themes is slightly misleading as it implies a passive process when what Braun and Clarke (2006) alluded to is actually a more active process in the generation of themes. Having collated a list consisting of different codes from across the data set, this phase required me to consider the meaning behind the code to help create themes. As I had coded manually, I copied codes onto post-it notes and stuck them onto flip chart paper on the floor. This allowed me to examine codes and move them easily onto different flip charts to combine relevant codes together. The code 'expectation' had appeared consistently throughout the data, and so initially I decided 'expectation' might be a theme. Returning to Braun and Clarke's (2006) approach it was evident that 'expectation' was semantic content and I had merely captured words in the text as illustrated in Table 11. Although codes can be semantic and latent, semantic codes might not move the data beyond descriptive analysis (Braun and Clarke, 2006). This phase took longer as themes had to be actively generated and encapsulated the essence of the codes.

Table 11: Illustration of Semantic and Latent Theme from NFG1

Verbatim Text	Example Code
Whether the clerking or the examination skills have improved, whether what we're doing is too much, not enough, I guess if there was a major problem our anaesthetist would probably have flagged this up by now but, there's that sort of, expectation that it just carries on and carries on without any further input.	Latent code – Lack of feedback/development Semantic code - expectation

3.7.2.4 Phase 4. Reviewing themes:

This phase focused on refining themes and involved two levels, one at code level and one at theme level. A thematic map was produced, highlighting data and initial themes (see Appendix C) and was a significant phase as it enabled me to think more about aspects of the data, such as 'does each theme make sense', 'what data supports a theme'? Addressing these types of questions enabled me to check if these themes had captured the content across the data set. It highlighted that certain themes did not represent the data and therefore it was important to review these themes before moving forward to the next phase.

3.7.2.5 Phase 5: Defining and naming themes:

In this penultimate stage of refining the themes it became evident that defining each theme needed to capture the essence of its subthemes. Braun and Clarke (2006) encouraged researchers to clearly define each theme and not make a theme too complex or diverse as, otherwise, determining what a theme is can be challenging. They also urged researchers to give themes 'punchy' and concise names to convey to readers an impression of what the theme is about. However, as a novice researcher I found it challenging to develop 'punchy' themes and instead focused on capturing the essence of subthemes. For instance, the role of the nurse captured the essence of the three subthemes shown in Table 12 and hence became the title for this theme.

Table 12: The Role of The Nurse

Theme	Subthemes	Codes
The Role of the Nurse	Protection, Permission and Purpose	Different roles and responsibilities, protection of the role, roles requiring responsibility and patient safety
	Confidence and Competence	Type of support, trust of others, feeling able and capable
	Clinical Setting	Type of skills used, deskilling, integration of skills

3.7.2.6 Phase 6. Producing the report:

Braun and Clarke (2006) referred to this as "to tell the complicated story of your data" (2006:93) by providing a detailed, logical account by selecting compelling examples that best capture points within the themes relevant to the research questions. It was also important that I represent the multiple views of participants' experiences and perceptions so I ensured excerpts were from across the data set. The findings of this study are presented in the next chapter.

3.8 Chapter Summary

This chapter has introduced and justified social constructivism as the 'lens' through which to capture participants' perceptions and experiences of nurses' use of HTPA in adult acute care settings. The criteria to identify hospital adult acute care settings and participant selection has been detailed. A hermeneutical-dialectical methodology and the application of the hermeneutic circle throughout the data collating and analysis process, with illustrative excerpts, have been described. Employing triangulation enabled multiple perspectives to be captured.

Chapter 4 Research Findings

The findings of nurses' and managers' perceptions on nurses' use of HTPA skills within adult acute care settings are presented in this chapter. Relevant findings are presented in themes to align with the thematic analysis approach undertaken in this research. Themes were created from the data set that captured the best essence of the findings from the participants' data sets (focus groups and interviews).

To portray the 'multiple realities' of nurses and managers, applying the broad principles of triangulation has been used to enable findings from interviews and focus groups to be combined. To portray insights into the complexities of acute care nurses use of HTPA more fully, both the focus group and interview data are presented collectively and threaded throughout all themes.

Verbatim excerpts have been chosen in an attempt to "tell the complicated story" (Braun and Clarke, 2006:93) of the data and to provide a detailed account. Lastly, as a reminder to the reader this study's three research questions were:

Q1.   How do nurses and their managers perceive nurses' use of history taking and physical assessment impacts on patient care?

Q2.   How do nurses and their managers perceive nurses' use of history taking and physical assessment skills has changed their nursing practice?

Q3.   What do nurses and their managers view as influential factors that aid or hinder nurses' use of history taking and physical assessment techniques in clinical practice settings?

4.1 Characteristics of the Nurses and Managers

Across four UK hospitals, the nurses and managers in this research were from a variety of acute care settings that covered inpatient and outpatient areas; orthopaedics, emergency department, surgical, oncology, dermatology, renal, gastrointestinal, respiratory, cardiac and day surgery units. The nurses had all been qualified nurses for over 10 years, and clinical grade Banding ranged from Band 5 to 8A. Nurses' job titles varied and included case manager, registered nurse, Nurse Practitioner (NP), Advanced Nurse Practitioner (ANP) and Clinical Nurse Specialist (CNS). In their current roles, 12 nurses worked part time and 9 worked full time, and the length of time in their current roles varied between 1 to 10 years. Nurses' level of education ranged from ENB to

Masters. Nurses had all undertaken formal HTPA education. Table 13 represents key features of the nurses' demographic details.

Table 13: Demographic Details of Acute Care Nurses

Demographic Nurses Details Form	
Male	2
Female	18
Acute care Area	
Orthopaedic	4
Cardiac	3
Surgical	2
Renal	2
Emergency Department	1
Skin	1
Pain	1
Oncology	1
Critical care outreach	1
Mental Health	1
Endoscopy	1
Respiratory	1
DSU 1	1
Agenda for change banding	
Grade 5	Band 5 (1)
Band 6	Band 6 (9)
Band 7	Band 7 (9)
Band 8A	Band 8A (1)
Highest Level of Educational Award Achieved	
ENB	1
Diploma	5
Bachelor Degree	10
Masters	4

The managers had all been qualified nurses for five or more years and worked across a range of acute care services or educational provision for acute care, as represented in Table 14.

Table 14: Demographic Details of Acute Care Managers

Demographic of Managers	
Acute care Area	
Orthopaedics	1
Surgical	3
Cardiac	1
Outpatients	1
Education Department	9
Educator Role	9
Manager Role	6

In reality, the titles and participants' perceptions of their nursing roles throughout all four hospitals varied hugely; e.g. Advanced Nurse Practitioner (ANP), Nurse Practitioner (NP), Clinical Nurse Specialist (CNS), Deputy Sister, Staff Nurse, Deputy Ward Sister, Nurse Case Manager, Senior Sister, Senior Staff Nurse, and Nurse Specialist. This made it difficult to group nurse participants by their role as well as the complexity due to lack of regulation of advanced practice across and within hospitals. Therefore, to help present the findings I decided to divide nurse participants into two subgroups: Nurse Practitioners (NPs) and ward nurses. The NP subgroup includes nurses who are staff nurses in clinics e.g. pre-operative assessment but who operate with a higher degree of autonomy compared to a ward nurse.

During the interviews and focus group discussions, many participants reflected back on their role as ward nurses or before they had HTPA skills which contributed toward these valuable insights into acute care nurses' use of HTPA skills.

4.2 Themes and Subthemes for Nurses and Managers

Three themes, with eight subthemes, were generated that captured nurses' and managers' experiences and perceptions of nurses' use of HTPA skills in adult acute care settings. As research involving health care can be complex, a Venn diagram is provided below in Figure 7 to offer a conceptual representation of the complex relationships between the themes and subthemes. The theme: The role of the Nurse, was seen as most central to nurses' use of HTPA skills and has been placed centrally to reflect the relationship with the other two themes; organisational barriers and HTPA 'added value'. The smaller circles are subthemes. Circular shapes were chosen to represent

the themes and subthemes as variable features rather than static aspects.

Figure 7: Venn Diagram
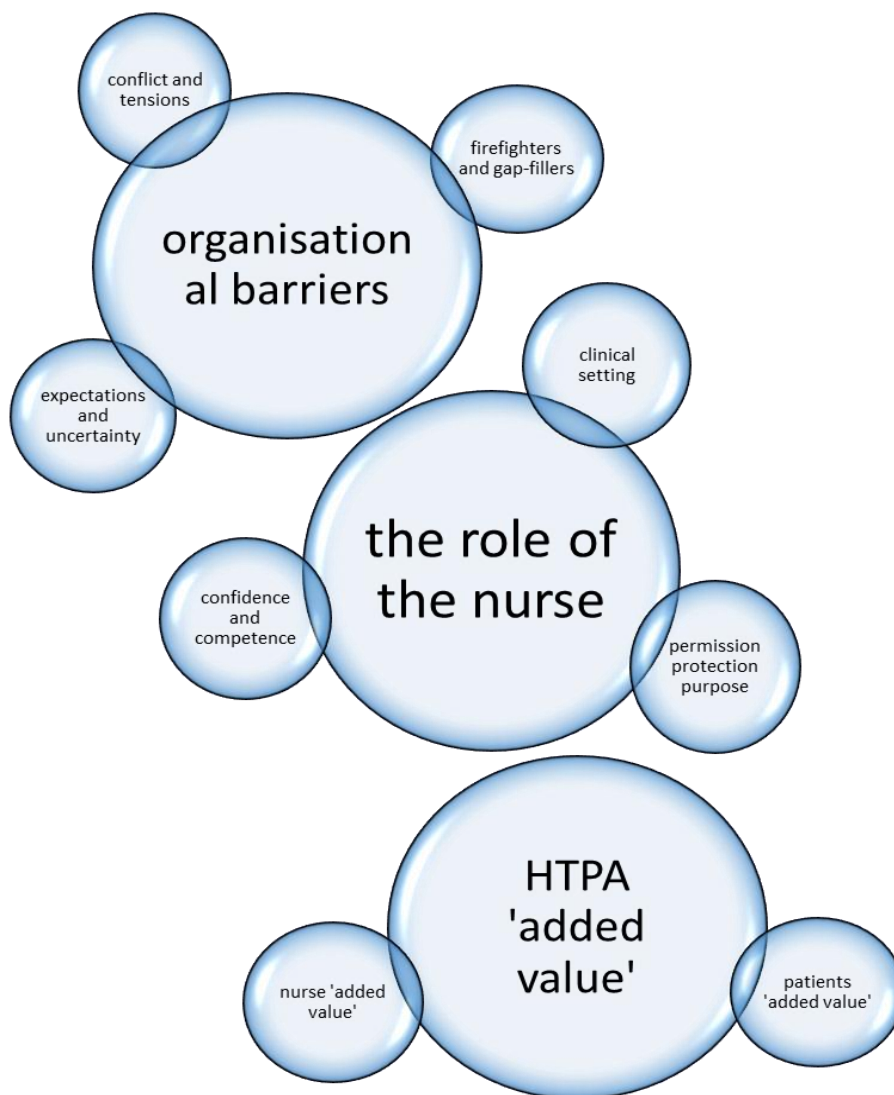
4.2.1 Theme 1: The Role of the Nurse

The role of the nurse represented fundamental aspects of what acute care nurses do as part of their day-to-day responsibilities in the hospital and factors that influenced their use of HTPA skills. During discussions and interviews, participants talked about many factors that facilitated and restricted acute care nurses' use of HTPA skills that formed the three subthemes, permission, protection and purpose, confidence and competence, and the clinical setting.

4.2.1.1 Permission, Protection and Purpose

Participants' discussions revealed acute care nurses' use of HTPA skills was influenced by the duties and tasks that they were required to undertake in their hospitals as part of their nursing role. The reasons to use HTPA skills and ways that safeguarded nurses in their ability to use the skills were also perceived to influence acute care nurses' use of the skills.

According to participants, NP roles were seen as having "formal responsibility" that appeared to legitimise the use of HTPA by giving nurses a sense of permission. For one manager the specification of job descriptions to use HTPA was seen as the "real driver" permitting nurses to use the skills. Unanimously, participants distinguished that ward nurse roles lacked formal responsibility to use HTPA, unlike NPs' roles:

> "It's [HTPA] not my responsibility" (NI ward nurse)
>
> "I wouldn't be able to do my role if I didn't have those skills [HTPA]." (NFG2.2 ANP)

Since ward nurses' roles lacked any formal responsibility to use HTPA, participants concluded this was a crucial barrier preventing ward nurses' from using the skills. Participants viewed ward nurses' roles as having "formalised" responsibilities in delivering the day-to-day nursing care of acutely ill patients. Several ward nurse participants described their daily responsibilities as "shift coordinator", "overseeing patient care" and "allocating patients to named nursing colleagues" while appropriately "delegating tasks and responding to situations of patients' clinical deterioration" to maintain the overall safety of everyone (patients, visitors, and staff). Ward nurses clearly have multiple responsibilities to manage and coordinate in overseeing the safety and care of acutely ill ward patients of which did not include the use of HTPA skills.

In contrast, NP roles had "formalised" responsibility to use HTPA which were considered "fundamental" and "core skills" for nurses working in advanced nursing roles. NPs had

responsibility for one acute care patient at a time, unlike ward nurses. HTPA skills appeared to be generally regarded as a core responsibility of NPs' roles in all hospitals.

The perception among some participants, especially managers, of nurses using HTPA was associated with increased responsibility. Many managers sensed not every ward nurse wanted the additional responsibility associated with using HTPA skills, and instead had a stronger desire to deliver traditional nursing tasks as opposed to the "medical orientated" HTPA skills, acknowledging this as a potential barrier and discouraging the use of HTPA:

> "We need band 5 nurses not everybody's somebody that goes up into the higher bands you know…there's always that person who remains a band 5… and that's brilliant." (MFG3.1 manager)

It may well be that some ward nurses might be less inclined to accept HTPA as a nursing responsibility because HTPA skills are not deeply rooted within the culture of the nursing profession.

Yet much debate surrounded which ward nurses' roles should take on the additional responsibility of using HTPA skills among participants. One view, strongly supported by some managers, claimed that some NPs had undertaken extensive training and education which might be undermined if HTPA became a formalised responsibility of ward nurses' roles. A few managers were insistent that because ward nurses' roles had other responsibilities to fulfil, HTPA had "no place on the ward", hinting that there might be no benefit to teaching the skills to ward nurses. As ward nurses, two managers recalled never using HTPA skills as part of that role:

> "I was a band 6 ward nurse and I never crossed the skills [HTPA] over, different role, different responsibilities." (MFG2.1 manager)

> "mmm…and that's my experience as well". (MFG2.3 educator)

Though other participants thought ward nurses were suitable to have formalised responsibility for HTPA, their views diverged. Some managers championed the use of HTPA skills for experienced senior ward nurses because they already had increased responsibility for the overall safety of all acutely ill ward patients. Other managers and a few nurses argued that, irrespective of seniority and experience, all ward nurses should have responsibility to use HTPA skills. Furthermore, a view

upheld by a few managers and nurses supported individual ward nurses who were "willing" to accept responsibility and "not coerced" should be given responsibility because they were more likely to use the skills.

Despite ward nurses being deemed to not "need" or "require" HTPA skills in order to perform their nursing duties and tasks e.g. administering medication, and wound dressing, all nurses working in acute care were believed to be responsible for the recognition and response to patients' clinical signs of deterioration, irrespective of role. Many of the participants' discussions touched on the recent implementation of the new track and trigger system rolled out across their hospitals in response to the governmental agenda, aimed at improving the detection and response to patients' signs of clinical deterioration. As a result, many managers and some nurses suspected the skills were now in greater demand, perceiving HTPA as highly sought after skills. Most participants concluded ward nurses only needed HTPA when acutely ill patients' clinical conditions warranted a physical assessment which might facilitate increased use of the skills:

> "You can employ them [HTPA] for your deteriorating patient…there's really big value now with NEWS and NEWS2." (NI.8 nurse)

> "…ward nurses would certainly benefit from doing those skills [HTPA]." (NI.1 NP)

Unlike NPs, ward nurses' constant presence on the ward was advantageous and meant ward nurses "get to know their patients", which was deemed important by one NP as it could alert ward nurses to subtle changes in acutely ill patients' conditions. Whilst another NP reasoned ward nurses needed to use HTPA so the skills could be applied to confirm their concerns about patients' worsening clinical conditions:

> "…there's a lot of nurses…base their actions purely on instinct, that horrible feeling that something's wrong but you can't quite put your finger on it…"(NI.10 NP)

Ward nurses, unlike NP, have multiple responsibilities to orchestrate in caring for all acutely ill patients on the ward yet there are potential benefits for patients care when ward nurses employ HTPA skills.

Some NPs viewed HTPA as "our primary purpose" and essential for NPs working in nurse-led areas e.g. clinics, and admission areas (ED) because nurses were acute care patients' first point of

contact instigating the history taking and physical assessment process. For some NPs, HTPA was needed to assess acutely ill ward patients referred by clinical colleagues e.g. doctors, and ward nurses. NPs used the skills in varied ways; to make decisions, deliver interventions, offer recommendations, and/or escalate concerns to more senior colleagues e.g. registrars, and consultants. HTPA skills aided NPs to detect and recognise clinical signs of deterioration and determine changes in acutely ill patients' conditions, especially when reassessing patients. Ultimately, many NPs seemed to need the skills to help inform the medical diagnosis of acutely ill patients.

Making a medical diagnosis was one reason most participants felt ward nurses did not use the skills. This was most apparent among participants' debates surrounding whether ward nurses needed to prescribe, or not, to provide necessary medication following patients' physical assessments. One NP concluded that it was not necessary for ward nurses to use physical assessment skills to determine possible causes of abnormal findings, but more importantly to recognise that a finding was not "normal". This view was challenged by another NP who thought it was insufficient to only acknowledge an abnormal finding, and that ward nurses needed to have some knowledge of pathophysiology otherwise they would not be able to act on their findings and provide appropriate nursing intervention. It is clear that there are differences of opinion surrounding ward nurses' use of HTPA and in going forward it may be important to address these for clinical practice.

The degree (level) to which an individual nurse had the ability to self-govern (autonomy) one's own workload was considered instrumental in influencing nurses' use of HTPA. Participants viewed ward nurses' roles as having the lowest level of autonomy. In contrast, NPs in advanced nurse practitioner (ANP) and clinical nurse specialist (CNS) roles were both regarded as having the highest level of autonomy. On the other hand, other NPs roles (non-ward nurse, case manager etc.) were seen to have a moderate level of autonomy fluctuating in between ward nurses and ANP/CNS. There was a general perception that roles with higher levels of autonomy offered nurses greater "protection" to use HTPA skills because such nurses had more "control" in managing their workload. Ward nurses had the least "protection" which was believed to prevent them from using the skills.

Thus "protection of the role" featured heavily in discussions and interviews and was believed to be essential to aid nurses' use of the skills. Protection of the role seemed to focus on the different ways that participants thought safeguarded nurses' so they could use HTPA skills. Protection was

important among participants as, otherwise; nurses could not be thorough in taking patients' histories and physical assessments. Protection for many participants was the ability to undertake one's own role fully and not be delegated the task of others (addressed in Theme 2: Nurses acting as gap fillers).

Participants compared NP roles to those of ward nurses and identified several ways that offered nurses "protection" in being able to utilise HTPA. In order for ward nurses' to use HTPA, their roles required protected "time to spend with one patient" which was highlighted as a facilitating factor of NP roles. Given the multiple responsibilities of their roles it was questionable among participants as to ways in which ward nurses might achieve this:

> "… a registered nurse in a general acute ward taking a team of patients, then isn't going to be able to utilise that [HTPA] skill…" (MFG3.1 manager)

For one manager, the physical environment afforded protection in the clinical setting which was seen as instrumental in enabling nurses to use the skills:

> "So those nurses that I know that use it [HTPA] the best…they are front of house triage so ED [emergency department]…they haven't got a ward of patients…and pre-assessment…where nurses in their rooms haven't got a bay of patients…"(MFG1.2 manager)

Therefore, not all nursing roles may need formal responsibility in order for nurses to use HTPA. Nonetheless, protection, permission and purpose are fundamental factors influencing acute care nurses' ability to use HTPA in acute care settings.

4.2.1.2 Subtheme 2: Confidence and competence

Participants perceived that feeling able and capable to use HTPA was a key factor that influenced acute care nurses' use of the skills. The ways in which support was provided and gaining the trust of others were seen to influence acute care nurses in feeling confident and competent to use HTPA skills.

Feelings of confidence and competence appeared to heavily influence nurses' use of HTPA. Participants often used the terms confidence and competence interchangeably inferring that both

might be inextricably linked. Despite terms being used interchangeably, the feeling of confidence appeared to focus on their own self-belief in their ability to use HTPA skills, whereas feeling competent appeared to be about their own belief in knowing they were capable of using the skills. Acquiring knowledge of HTPA was a vital factor influencing nurses' confidence and competence in using the skills. First and foremost, access to HTPA knowledge was necessary to develop nurses' feelings of confidence and competence. Among managers, formal HTPA education compared to experiential learning was strongly preferred as managers felt assured that HTPA education provided nurses with the "appropriate" knowledge and was imperative for nurses to work within their professional scope of practice, especially those undertaking NP roles. Interestingly only one NP reinforced this point and advised that caution was necessary for nurses learning HTPA skills experientially as the information learned might be inadequate:

> "…so when I first started in [critical care area] you were taught and you would do
> assessments with them [nursing colleagues] every single day…they hadn't done a history
> taking course so…information that was disseminated…depending on where it had come
> from it could be right or wrong…"(NI.4 NP)

The real bonus of prior experiential learning for one NP who was a mentor to nursing colleagues was that nurses already felt confident and capable of using the skills and were perceived to transfer the skills much more quickly.

Among nurses, "relevant" and "appropriate" knowledge of HTPA education referred to both the "theory and practice" of the skills. A few managers held the belief that nurses were more likely to be successful in using HTPA if they had received an appropriate education. Nurses felt formal HTPA education taught relevant underpinning knowledge of "normal and abnormal" findings, while many managers seemed satisfied that nurses were taught how to perform the skills correctly. Formal HTPA education that did not provide nurses with the opportunities to "practice" in the classroom were considered "too basic", indicating that such education might be inadequate to aid nurses, especially ward nurses, to develop feelings of confidence and competence.

HTPA education was regarded as being "challenging" and "not for the faint-hearted" by many managers, making one manager contemplate what "drives" ward nurses to attend HTPA education? Nurses attending HTPA education had to be "dedicated", "willing" and ''motivated" and take some "onus" in developing their feelings of confidence and competence to transfer their learning of the skills in the clinical setting. Several nurses felt that feeling less confident prevented

individuals from seeking support to aid their development of the skills, and hence, for some participants, experienced nurses were seen as more suitable, as they already have confidence and competence in performing their nursing tasks. One NP described their HTPA education as being the "best course I've ever done" because the skills were pragmatic, whilst another NP likened their learning and development of the skills to a "journey".

Being aware that HTPA education is "only the start of it", and formed the foundation of the building blocks to learn and develop the skills, came across as being important for a few NPs, suggesting that it might be a hard and long process for nurses to build their feelings of confidence and competence to transfer the learning of HTPA in the clinical setting. Nurses and managers may find this a valuable point to be aware of prior to nurses agreeing to undertake HTPA education.

The opportunity to practice HTPA in the classroom and clinical setting was highly desirable among participants to develop confidence and competence. Reminiscing on their own HTPA education, many participants told how practicing EPAS with peers in the classroom enabled them to begin to recognise "normal" findings, making them feel confident and capable of detecting "abnormal" findings in the clinical setting. However, HTPA education of itself had limitations, and the opportunity to practice on "real patients" was essential for nurses to augment their feelings of confidence and competence. For one NP, not all taught skills were possible to practice in the classroom setting e.g. palpating the groin region which made them feel less confident and less capable of initially practicing in the clinical setting. Exposure to variations of "abnormal" findings in the clinical setting helped nurses modify and adapt their use of the skills when conducting physical assessments on acutely ill patients:

> "…but it is very different as you know when you go out and utilise them [skills] on the general public you have significant health issues…"(NFG3a.3 NP)

> "…I felt like I was starting again when I finished the course…so from that perspective the course didn't help at all, but quite rightly you can't go "Right drop your trousers to one of your colleagues [peers on course] (group laughter), I wanna have a feel of" [more group laughter] so it's learning on the job [chuckles]". (NFGP2.4 NP)

> "…the patients you come across…can't necessarily get into those positions you want…"(NFG3a.2 NP)

Although nurses can practice HTPA in a classroom setting on healthy individuals, there still appear to be many challenges for nurses to develop their confidence and competence in the clinical setting.

Participants noted ward nurses had less "opportunity" and "protected time" to practice physical assessment skills in the clinical setting compared to NPs. One NP believed a lack of opportunity was to blame for ward nurses not developing their confidence to use the skills. Given ward nurses' heavy workloads, participants struggled to see how ward nurses could find time to practise the skills on the wards. For these reasons many participants thought this was why ward nurses might prefer to deliver traditional nursing tasks rather than use HTPA skills. Another NP noted that, if an individual did not feel confident, ward nurses were far less likely to use physical assessment skills, choosing instead to perform more familiar tasks:

> "If you have two jobs either assessing a patient or going and doing something else like taking bloods, they'll [ward nurse] probably go to the one they're more confident in doing." (NFG3b.2 NP)

Many nurses hinted that developing their feelings of confidence and competence to transfer HTPA skills in the clinical setting "takes time" and "lots of practice" (that is, opportunities). One NP recalled that practicing "every day examining patients" helped them develop their feeling of confidence faster. A few managers felt nurses needed encouragement to practice and build their confidence and competence in their clinical settings straight after completing their HTPA education. However, in hindsight, for one NP, the opportunities to practice in the clinical setting needed to be concurrent with their HTPA education to help nurses feel confident and competent in using the skills before their HTPA education had finished.

In contrast to NPs, ward nurses were seen as having plenty of opportunities to practice their history taking skills during acute care patients' admission process. Opportunities to practice history taking were important for all nurses, and, indeed, some nurses found practicing history taking in the clinical setting to be far more constructive and realistic than in the classroom. This finding might be of interest to educationalists to perhaps raise awareness that learning history taking skills outside the clinical setting might be more complex compared to learning the physical assessment skills. One NP confessed to only comprehend the significance of communicating effectively and eliciting "relevant" information from acutely ill patients, well after completing their HTPA education.

"It's [history taking] very much a learning on the job as well, I think you take a history differently from one patient to the next depending on what the patient, how they responded to your questions…"(NFG2.3 NP)

To transfer the learning of HTPA skills from the classroom to the clinical setting, senior mentor support was preferred and deemed superior by many NPs. Senior mentors were regarded as being proficient and knowledgeable which facilitated nurses in developing their confidence and competence in using the skills. On the other hand, junior doctors were viewed as still "training themselves" and lacked clinical experience which was problematic in supervising nurses:

"…we have to refer to the FY1's [junior doctors] who come along, listen as a second pair of ears, quite often can't hear a murmur because they're not as experienced listening…and then we get that barrier of we can hear one, they can't…and then all we have to write is murmur suspected…" (NFG1.1 NP)

It is quite possible that the hierarchical structure within hospitals influences nurses' abilities and capabilities to use HTPA skills and requires further consideration.

Support from more than one senior mentor was favoured and enabled NPs to "pick up hints from other people" to develop their confidence and competence in taking patients' histories and conducting physical assessments. For one NP, encouraging all nurses to "pick up a stethoscope and listen to a chest" by offering to work alongside them was important. This same NP believed nurses usually felt "nervous and not as confident" to perform the skills back in the clinical setting. Constant mentor support to give "critical feedback" to affirm or disaffirm clinical findings were essential for NP to develop their confidence and competence. Ward nurses lacked mentor support and feedback. One manager recollected from their time as a ward nurse feeling confident to use the skills, but when it really mattered, they felt less capable to distinguish between different abnormal findings without having had confirmation from a mentor:

"…although I could use skills…when you need them, when the patients were sick you didn't have time to say somebody is this that what I heard, is this right? So it's really hard to…embed the skills"(MFG2.3. educator)

It may be that if nurses feel confident but less competent to use the skills, or vice versa, it might

restrict them in their use of the skills.

Many NPs shared their relief when mentor support was organized by their managers. One ward nurse acknowledged that it had been difficult and time consuming seeking out appropriate mentor support by themselves as they did not know where to find a mentor. Participants agreed that the lack of mentor support for ward nurses was a major obstacle preventing ward nurses from developing their confidence and competence to use the skills:

> "…I think the ward nurses would really struggle with their confidence because there'd be no one there to say 'no you're not feeling that right you should be feeling this, have you felt that' cos they're [ward nurses] not just gonna do it [use HTPA] are they…" (MFGP.5 educator)

Given ward nurses' multiple responsibilities in caring for a group of acutely ill patients it appears it might be complex and challenging for them to obtain and have time for mentor support to develop their use of HTPA skills in acute care wards compared to a NP.

The onus on individuals to seek out support was also seen as a crucial aspect influencing nurses' use of the skills. A few NPs shared feeling less confident and competent following periods of absence in using HTPA skills that meant they started to doubt their ability to use the skills, indicating perhaps that individual nurses' feelings of confidence and competence fluctuate. Many participants acknowledged that the "fear" of not detecting or not recognising abnormal findings was a major factor preventing ward nurses from using the skills, particularly if they lacked mentor support. One NP described their learning experience of practising the skills in the clinical setting as feeling "terrible all of the time". Another NP believed that even if HTPA education was successfully completed some nurses were still more "nervous to physically pick up a stethoscope" and physically assess real patients. For these reasons many participants believed ward nurses might be too afraid to use the skills.

Being deemed clinically competent was concerned with establishing the trust of others, especially doctors and patients, which was highly important for most participants. Many nurses associated clinical competence as being seen to be credible in their ability and capability to use HTPA skills. For the majority of nurse participants, the main way to demonstrate their clinical competency involved some type of in-house assessment that determined whether individual nurses were competent in their performance and/or knowledge of HTPA (safe/correct).

Among nurses, there was variation in the ways to determine clinical competency to attain their in-house clinical competencies; for example, keeping reflexive journals, undertaking oral assessments and/or required to demonstrate physical assessment themselves. Nevertheless, many nurses criticised the need to have clinical competencies assessed because the goals of the competencies were realistic, which made it challenging for nurses, especially ward nurses, to complete them, to be "signed off" and thus be assessed as clinically competent. These same nurses firmly believed their in-house clinical competencies severely impeded ward nurses' ability to use HTPA skills:

> "…in terms of competencies…I think with the in-house…you have to do [about 50] after you've completed the course but how on earth are you going to get that supervision with lack of staff like it is…". (NFG3b.3 NP)

Most in-house clinical competencies appeared to focus on the physical assessment rather than the history taking which is curious given the importance of the history noted among participants.

For other nurses, there had been no formal in-house clinical competencies and it had been merely left up to the individual nurse to determine if they felt both confident and competent to use HTPA skills. One NP suggested that both their nursing and doctor colleagues perceived them to be clinically competent after successfully completing their HTPA education; this was a view also shared by a manager:

> "…you know having done the course you can demonstrate the competency, you know I struggle to see how else they can demonstrate their competency…" (MFG4.1 educator)

Given that the local course, and possibly others nationally, make clear that competence is context specific and must be attained and verified in the practice setting, suggesting that an individual nurse is clinically competent following the successful completion of HTPA education is a major misinterpretation, and a significant finding to follow up.

Many nurses found it normal that gaining the trust of colleagues, especially doctors, took time. Nurses' perception of how trust had been gained differed. Some nurse participants seemed to take a lack of feedback from doctors on the findings of their patient assessment as a sign of being "trustworthy", while other nurse participants perceived that trust had been gained when doctors did not "duplicate" their physical assessments. Nurses conveyed a great sense of achievement

and pride in the accomplishment of being seen as credible by others, especially doctors; indeed, one NP recalled it was a "massive compliment" when consultants showed them their trust in using the skills. When nurses receive compliments from clinical colleagues it may well give them a sense of appreciation for being able to use HTPA skills.

However, one NP remarked that "it's not until you go out there on your own" having attained in-house clinical competencies that the "real learning" started. Perhaps forewarning acute care nurses that their feelings of confidence and competence is a key factor influencing the use of HTPA continuously and needs to be maintained to prevent nurses feeling less confident and competent to use the skills.

4.2.1.3 Subtheme 3: Clinical Setting

The clinical setting referred to the acute care area in which nurses worked which was seen to influence the type of HTPA skills used and how participants viewed the deskilling of HTPA skills. The ways in which the skills were integrated as part of their nursing practice and the severity of patients' clinical condition was also perceived to influence acute care nurses' use of HTPA.

The areas of clinical specialism e.g. respiratory, gastrointestinal, and emergency department were seen to heavily influence the type of HTPA skills used. Unlike ward nurses, many NPs labelled themselves as either "specialists" or "generalists" to denote their range of HTPA skills respectively; narrow or broad. HTPA skills that NPs relied on using in their day-to-day nursing practice were regarded as "bread and butter" skills which was considered "common practice" among most participants. The culture of the nursing profession may possibly contribute to how nurses perceive their use of their HTPA skills.

Working in "specialised" areas was a drawback for two NP who reasoned specialised clinical settings restricted the range of HTPA skills used by nurses. For one NP, nursing as a profession had "become far too specialised" and was lacking in "generalist" nurses. Yet, for a few NPs the bonus of working in specialised areas inferred the ability to develop mastery and proficiency of their "bread and butter" skills, as well as the potential to acquire additional HTPA skills beyond those taught via formal HTPA education. It is possible that nurses working in specialised acute care settings might strive to gain mastery of HTPA skills relevant to their particular area of specialism compared to those nurses working across generalised acute care settings e.g. ED.

Most managers and NPs struggled to comprehend when "non-relevant" (unused) HTPA skills, especially physical assessment skills, would be used by NPs working in an area of specialism:

> "I could imagine a colorectal nurse doing a follow up in a clinic, isn't potentially gonna use a neurological aspect [physical skill]…" (MFG4.1 educator)

How nurses perceived unused EPAS varied and were described as "redundant", "lost" or "forgotten". One NP referred to their "forgotten" skills as needing to be "polished off" because they needed to relearn them. Many participants expressed regret that not all taught HTPA skills were used and saw deskilling as being pragmatic because it was not possible to retain unused skills. One ward nurse revealed feeling "worried" and concerned about losing their HTPA skills. Interestingly, these same nurses appeared confident that since their HTPA education they now felt capable of "going back to the books" or seeking out support from colleagues' to relearn any unused skills.

History taking was seen as a universal skill that all acute care nurses could integrate into their nursing practice. A few nurses reported it was challenging to take a history from an acutely ill patient, particularly if they lacked understanding e.g. due to their clinical condition which was envisaged to hinder nurses from gathering "relevant" information. For a few NPs, being reliant on the history taking of others, like doctors, hampered their reassessment of acutely ill patients as vital information was often scant which they deemed insufficient compared to nurses' documentation. There was, however, also the perception that being specialised enabled nurses to ask relevant questions that might be overlooked by others working in different areas of clinical specialism:

> "…and then I'll go and take my own history because other people don't take a history about urinary systems or do you pee frequently, or do you get up in the night for a wee, those stuff can be really important…"(NI.3 ANP)

To obtain patients' histories, nurses needed to constantly rephrase or ask questions differently to elicit "relevant" information which varied from patient to patient. Many nurses and some managers believed OLDCART (acronym) helped elicit "relevant" information using a structured approach and enabled a thorough exploration of patients presenting problems in less time critical situations:

"…well in terms of history taking I mean, I suppose I went from…a "Do you have a cardiac history" that maybe angina to "Okay, Sir how often does your angina present, how does it present, what relieves it, what triggers it" you know so you do that drilling down" (MFG4.2 manager)

Participants thought nurses integrated HTPA skills into their clinical practice in various ways. One manager suspected nurses "develop their own style" and integrate skills to fit into their prior "routine or pattern of working" depending on where they worked. There was a general awareness that NPs used structured approaches to conduct their physical assessments, whereas ward nurses were considered to integrate HTPA skills less formally whilst undertaking other nursing tasks e.g. medication round, wound dressing. For this reason, some participants thought ward nurses probably used unstructured approaches and relied heavily on observational skills to alert them to changes or signs of clinical deterioration.

Many nurses appeared to take shortcuts in using HTPA skills to assess acutely ill patients. A few NP confessed to only conducting a thorough examination if any abnormal finding was found in taking shortcuts. A strong belief among a few participants was that the ability to take shortcuts was linked to being more expert and proficient in using the skills such as senior doctors and experienced NPs, indicating that possibly ward nurses were not regarded as being able to gain expert use of physical assessment skills. Two NPs described the ability to take shortcuts as "cherry picking" because it required the ability to use physical skills selectively.

For one NP, acute care nurses with inexperience of using HTPA often observed clinical senior colleagues e.g. consultants using the skills, who habitually take shortcuts in their patient assessment. This same NP warned that the real danger was that inexperienced nurses might misconstrue taking shortcuts as being standard practice, potentially resulting in inexperienced nurses cutting corners. The clinical setting in which nurses work influences their use of the skills and how they integrate the skills into their nursing practice.

4.2.2 Theme 2: Organisational Barriers

This theme was created from findings in the data of participants' discussions and conversations portraying the immense pressure on nursing staff concerning staffing shortages, workload pressures, conflicts, and tensions within their organisations that restricted or prevented acute care nurses' use of HTPA. These factors focused on three subthemes: nurses acting as 'firefighters

and gap-fillers', conflict and tensions, and expectations and uncertainty.

4.2.2.1 Subtheme 1: Nurses Acting as 'Firefighters and Gap- Fillers'

This subtheme centred on participants' perceptions surrounding organisational pressures, particularly workload pressures, increased demands on acute care services, and increased severity of acute care patients' illnesses that limited or prevented acute care nurses' use of HTPA skills.

Delivering nursing care to acutely ill patients was regarded as now being more complex, demanding, and challenging for nurses as patients had "more comorbidities" and "underlying illnesses" secondary to their acute illnesses. Some managers expressed that 'nursing has changed,' perhaps reflecting that different care is now required due to the "increased acuity" and severity of acute care patients' illnesses. A few participants noted more patients were now being nursed in the community so that hospital beds remain available for those patients in most need e.g. acutely ill.

Constant difficulties surrounding insufficient nursing staff numbers and increased severity of illness of acute care patients were alleged to prevent ward nurses from using HTPA skills. Acute care wards struggled to recruit and retain nurses and had "massive RN (registered nurse) vacancies" which were deemed to contribute to inadequate staffing level issues. Some managers reasoned ward nurses were far too busy "firefighting" and "spread too thin" throughout their shifts, making "patient safety" their priority of care:

> "…once again it's about workload and time constraints…I think sometimes the workload is so heavy that they [ward nurses] do what they can to safely get through the shift." (MFG2.3 manager)

> "…so I think recruitment is the biggest issue…and staffing…" (MFG1.1 manager)

This portrays an image of the intense environment in which ward nurses work and is potentially a major factor preventing their use of HTPA skills.

Ward nurses were seen to be under "immense pressure" throughout their whole shift. One nurse described their routine shifts as "work is very stressful because of staff shortages". Nurses' workload appeared task orientated, busy, and physically demanding and seemed to cause nurses

to feel dissatisfied perhaps due to impacting the quality of care that nurses wanted to provide for their patients:

> "…its [satisfaction] becoming less and less because the physical jobs [washing, moving and handling] they [nurses] have to do and not all of us are happy about it…but it's the way it's happening which I know it's a job [part of your role]…and to do it [patient care] the way you would like.. the way you learn in school but it [patient care] never happens that way…" (NI.2 ward nurse)

This nurse might be discontent that ward nurses lack autonomy in being able to deliver care to the patients in the way that they want, and perhaps precludes ward nurses' use of HTPA.

Heavy workloads were deemed problematic for junior and senior ward nurses. One nurse explained, "there's so much else going on" due to heavy workloads and no "protected time" that it was not possible for ward nurses to use HTPA to assess acutely ill patients' clinical conditions. One manager revealed senior ward nurses were also overburdened at work and struggled to use HTPA skills because it was an additional task increasing their workload:

> "We don't have enough staff to even do our job properly…releasing senior nurses to the things they need to do [use HTPA] rather than washing and seeing patients all the time, yes some of the time, but yeah it's just so full on its [HTPA] extra capacity for someone to take it on at the moment."(MFG1.1 manager)

It seems plausible that a nurse's workload hampers the use of HTPA skills. Therefore, perhaps careful consideration should be given to exploring ways in which ward nurses' workload can be decreased to enable them to increase their use of the skills.

Many participants felt increased and "heavy workloads" resulted in ward nurses having "less time for talking" with patients, which is a concern, given talking with patients enables ward nurses to gather relevant information e.g. history taking about patients' health status. Completing acute care patients' admission history was considered by one ward nurse as a barrier stopping some ward nurses from using history taking skills. This same nurse explained the admission documentation was lengthy and excessive (over 40 pages) taking up too much time to be completed thoroughly, and it was now customary for the ward nurses to delegate gathering a patient's history back to the doctors. There is a real concern given that the history taking skills

were perceived by participants as a universal skill valuable for all nurses (as noted in theme one).

The ward nurse role was viewed as being busy and laden with numerous competing tasks e.g. hygiene, wound care, administration of medication, and nutrition to provide a range of essential care needs to acutely ill patients. Most participants claimed these competing tasks hampered or prevented ward nurses' use of HTPA:

> "If you're a ward nurse and you've got a patient who needs a commode or listen to someone's [patient] chest, well it's gonna be the commode isn't it!" (MFG3.1 manager)

Ward nurses probably prioritise patients' self-care needs that are core to their nursing role over using HTPA skills.

Some NPs also struggled with increased workloads. NPs working in clinics, such as pre-operative assessment and pain clinics, felt "stressed" and under pressure too. Several of these nurses experienced anger and upset at constantly having to increase their workload which they perceived impacted negatively on their patients' safety, making them worry about making a mistake, irritating one NP:

> "It makes me annoyed...I got to the point...taking on new [more] patients because I might get it wrong...and we've all made decisions, was that the right decision for that patient? but...I've had to make a decision not to see new [more] patients..." (NFG1.4 NP)

Nurses were clearly concerned about the potential to make mistakes when working under pressure which might impact negatively on their patient's care.

A depleted number of NPs in their nursing team meant an increased workload for two NPs, who explained that a trainee NPs "can't do physicals" and therefore these two NPs had to "do [their] own work and do their [trainee NPs] physical assessments". Clearly, nurses across hospitals' acute care services appear to be facing immense workload pressures confounded by staffing difficulties that are restricting and/or preventing their use of HTPA.

"Gap filling" was an expression taken from the findings as it reflected participants' perceptions surrounding inadequate staffing numbers (nursing and non-nursing) that influenced acute care nurses' use of HTPA skills. "Gap filling" portrayed participants' feelings and experiences as a result

of being delegated the tasks of others and, in doing so, taking up the shortfall in their hospitals' acute care services.

Persistent workforce pressures surrounding staff shortages and the increased demands on hospitals' acute care services were regarded as impacting negatively on nurses' use of HTPA skills. There was a general consensus among participants that nurses regularly found themselves taking up the shortfall of others e.g. phlebotomists, by filling any gaps in acute care services which emerged as being problematic, as summed up by one manager:

> "I mean the biggest challenge, isn't it, is that nurses fill the gaps so if there was a lack of porters one day to go for an ultrasound [take a patient]… it would be the nurse that would do it… the way the NHS runs is whatever gaps there might be, the nurses absorb into that." (MFG2.5 educator).

This manager appears to be implying that within the culture of the NHS the general acceptance is that nurses will always be the ones to take up the shortfall of others and therefore time to use HTPA is compromised.

Being delegated the task of others was associated with not being able to use HTPA. There was a perception that NPs expected to use HTPA, having "signed up to do for that particular shift", and then "being hauled off" to perform others' tasks was considered to be unfair on nurses by one manager. For a few NPs and managers this was viewed as being taken advantage of, and one manager reasoned it might contribute to the attrition of nurses. The delegation of others' tasks was not uncommon and occurred frequently for some NPs. NPs working in nursing teams seemed most susceptible to task substitution as one NP explained, the persistent staffing problems in other departments often resulted in being delegated others' tasks to ensure the smooth running of acute care services was maintained, and patients' blood results were back before the doctors started their ward round. This prevented NPs from doing their job in using HTPA skills to assess acutely ill ward patients:

> "We often do a lot of phlebotomy erm to erm get the bloods done so we can get them back at a reasonable hour [before doctors ward round], and things like that as there's other things that we're doing…we're doing a full top to toe assessment [using HTPA]." (NFG3b.3 NP)

This seems reminiscent of task substitution which, although not uncommon within the nursing profession, is questionable here as to whether such task substitutions are appropriate, or not.

Equally, many participants recounted situations where nurses with HTPA skills were being delegated tasks to expedite the backlog of patients in other acute care areas. One group of managers disclosed that NPs were deployed to the emergency department (ED) to write patients' prescriptions that the doctors had requested to speed up acute care patients' discharge.

A few nurses expressed feeling "frustration" and "annoyed" at being delegated tasks and appeared to feel obligated in accepting such tasks to ensure the smooth delivery of acute care services was maintained. A couple of nurses described being delegated others' tasks as being "peeled" and "pulled away" from using their HTPA, perhaps signifying nurses feel they sacrifice using HTPA skills in order to perform the delegated tasks of others.

It was common practice in two hospitals for trainee NPs to be in the post before attending HTPA education. Some participants recalled trainee NP colleagues often waited for an excessive length of time (6 months to a year) before being able to attend HTPA education, during which time trainee NPs were unable to undertake their role fully. One NP vividly remembered their time as a trainee NP and recalled only being able to undertake menial and mundane tasks e.g. electrocardiograms (ECG) and Methicillin- resistant Staphylococcus aureus (MRSA) swabs. This same NP described their experience as "a bit disheartening" after "being in nursing for so many years" because they were unable to even fulfil the role of a registered nurse. One manager summed the situation up:

> "…you've got people doing a job role that they're not trained potential to do they're just…kinda filling in the gaps wherever doing the blood and filling in other gaps but they certainly feel as if they're not doing their role properly…" (MFG2.2 educator)

Given the staffing problems within hospitals' acute care services, it is a real concern that registered nurses in trainee NP positions seem to be working well beneath their scope of professional practice. More shockingly, it seems acceptable practice among some managers and nurses perhaps pointing towards the nursing culture being influential. Even so, firefighting and gap-filling are key organisational barriers hampering nurses from using HTPA.

4.2.2.2 Subtheme 3: Conflict and Tensions

Conflict and tensions captured participants' perceptions surrounding their negative emotions, frustration and the dilemmas that were experienced due to factors that prevented and restricted acute care nurses use of HTPA skills. Factors involved nurses' education and training of HTPA skills and their scope of professional practice.

Despite all nursing roles being deemed "valued" by managers, some managers views revealed otherwise. The work of ward nurses was perceived as being mundane, busy, and task orientated in contrast to the "exciting" and "sexy" work of NPs in using HTPA skills. Acute care nurses seeking out NPs roles were regarded as being "highflyers" and ward nurses as being less ambitious and more underachieving than their NP counterparts. HTPA were regarded as a "luxury" and "GUCCI" skills, possibly signifying two tiers within nursing. For one NP "as awful as it sounds, you're not just a nurse" undertaking general nursing tasks. Not feeling like an ordinary nurse and being perceived as being a "better nurse" were viewpoints shared only by other NPs and some managers. A division between NPs and ward nurses was clearly evident whereby NPs could possibly be perceived as being superior to ward nurses.

In most hospitals priority for training and HTPA education was given to NPs. The financial cost and limited availability of HTPA education meant some managers had to discriminate against nurses whose roles lacked "formalised responsibility" to use the skills. A few managers in one hospital acknowledged that ward nurses were only ever offered in-house training which was often cancelled due to staffing problems across acute care services. Because ward nurses did not seek out NP roles, it was assumed that they did not want to use HTPA skills. The predicament for one manager was having to invest in NPs HTPA education when the ward nurses needed investing in too:

> "…now I'm a ward manager there…there's the dilemma isn't it cause the fundamental nurse as such is the most important person really we wanna keep people safe but they should be able to develop on from the fundamental as well…" (MFG2.1 manager)

This manager has exposed that ward nurses as well as NPs need to be invested in using HTPA skills to equip them in keeping acutely ill ward patients safe.

In another hospital, many participants felt there is little recognition or reward for ward nurses using HTPA skills which might make nurses feel devalued and dissatisfied, as shared by one NP:

> "I was talking to one of the staff nurses…and they said they'd been on a ward and said
> everybody was lovely but everybody was burnt out… cos no one had been developed, no
> one had any support, they were all staff nurses but none of them had been
> developed…and what they were doing was finding their patient wasn't unsafe but there
> was no interest beyond coming to work doing their job and going home. Whereas they
> said, 'you go in there and you're thinking there's a whole lot more that could be done for
> those patients to make their lives and nursing health management would be far better' …
> they didn't have the skills they didn't have training they hadn't been developed." (NI.3
> ANP)

A few NPs expressed frustration, concern and annoyance at restrictions imposed on them by their
organisations that they felt prevented them from acting on any abnormal findings. For these few
NPs the lack of a "doctor badge" created friction and conflict between them and other colleagues:

> "…you feel you've started a set process…for example of an investigation and then a form
> bounces back to you and you'd thought this had already been sorted and now I've got to
> go back and chase it cause they [radiologists] won't accept the signature…that's the
> barrier "Oh my god I've got to get this done and signed"…although you're the one whose
> written it out [the request form], it is a bizarre situation…" (NFG4.4 NP)

> "What frustrates me is I can't request a CT scan, I write it all out but we're not allowed to
> sign it…so we've done all our training so we can request x-rays and ultrasounds…"(NI.5
> NP)

As a result of using HTPA these particular NPs may be experiencing some type of conflict in the
workplace involving their boundaries and professional scope of practice. Evidently, for some
nurses, using HTPA as part of their role might create challenges and complexities for individuals in
identifying the limitations of their professional boundaries.

One manager vocalized strongly that nurses, especially ward nurses are "micromanaged" and
"lack control" in making decisions that indirectly impacted on acutely ill patients' care. Ward
nurses had the least level of autonomy to prioritise the care that they might consider important
for their patients from those of a wider organisational perspective which was perceived as a
barrier preventing them from using HTPA:

"…if you had a day on the ward that's really busy and you had a patient that was sick that you could take two minutes to listen to their chest or, you could do a cleaning job, it would be the cleaning job that would come back to bite you afterwards if you didn't do it because you have a cleaning checklist that have to be signed…" (MFG2.3 educator)

The debate here is the fact that senior managers clearly have targets to achieve in line with the governmental agenda and, whilst such checklists are important, are registered nurses best suited to being delegated such tasks?

One manager seemed perturbed that ward nurses had to conform to undertaking a lower skilled task e.g. completing a checklist above the importance of conducting "a highly skilled examination" of an acutely ill patient. Although participants showed awareness that managers had different priorities concerning the safety and care of acutely ill patients, nurse participants perceived managers at all levels heavily influenced acute care nurses' use of HTPA skills. Nurse participants reasoned not all senior, or non-clinical managers "fully understand what you do" and "haven't done the job themselves" and held managers accountable for the inappropriate delegation of others' tasks. If managers lack insight into nurses' roles, it might be a root cause of inadequate delegation and task substitution within hospitals' acute care services.

4.2.2.3 Subtheme 4: Expectations and Uncertainty

This subtheme captured participants' confusion and the lack of clarity surrounding acute care nurses' ability to use HTPA skills. The perceived demands and requirements made on nurses also contributed to negative feelings surrounding acute care nurses' use of the skills.

Participants believed there were "a lot of other expectations on nurses nowadays" working in acute care hospitals. Some participants thought others' e.g. doctors' and managers' expectations "of nurses has changed" implying that nurses might not be aware of what others expect of them. Many participants believed a lack of clarity of roles caused confusion for nurses, doctors, and patients. New roles were deemed as being poorly defined, not well thought out, or evolving over time. Participants were unable to give examples of such new roles but firmly believed that they created uncertainty and confusion for nurses as to what was expected of them in terms of using HTPA:

"… I think the roles are quite sometimes not clear, like for example new roles that then get developed." (MFG4.3 educator)

It was not just new roles that created uncertainty. Several participants acknowledged that with so many varied NPs' roles across hospitals' acute care services, participants seemed to find this confusing. Some participants' discussions appeared to suggest that role standardization of NPs, like ward nurses' roles, might help cause less uncertainty and confusion surrounding NP roles:

> "I think also…the job descriptions they don't quite line up with other job descriptions, what banding they're getting for certain jobs they're doing and what the expectations are." (NI.4 NP)

A lack of clarity also occurred when managers and nurses had diverging expectations, or no expectations of how nurses were to use their skills in the clinical setting. For one ward nurse, managers had a responsibility to make clear to nurses the way in which they were supposed to use HTPA skills:

> "I think meeting the expectation, so if a nurse or role expected to do x,y,z, brilliant! but how are they [managers] expecting them [nurses] to already know this?…"(NFG2.2 ward nurse)

Some managers thought it was necessary to assist nurses in understanding the reason they were expected to use HTPA skills:

> "…it's also about having a clear idea as to why you've done the course [HTPA] , what it is about your work that you're doing that is going to be helpful…" (MFG1.3 educator)

Two ward nurses and one NP confessed that having completed HTPA education there had been no expectation for them to develop their use of the skills further. Reflecting, one of these same ward nurses wondered why they had been sent on the course when "I'm not really going to use it properly" and "it's just a waste" of a valuable resource. This was echoed by another ward nurse:

> "…it's a waste cause I don't think somebody somewhere is not realising how we can enhance our skills and change the culture and be more knowledgeable especially to help with the physical stuff…there's got to be someone who knows about these things surely…if there isn't there should be." (NI. 11 ward nurse)

The lack of expected future HTPA development and maintaining clinical competencies was a major concern for many nurses. Many nurses wanted and seemed to "expect" annual HTPA updates, especially nurses working in "specialised" clinical settings. Managers were held accountable for providing other annual mandatory training e.g. cardiopulmonary resuscitation and for this reason some nurses expected them to provide relevant HTPA training which seemed lacking. One NP conveyed feelings akin to abandonment due to a lack of feedback from managers as to whether they were meeting the expected demands of their department's service in using HTPA skills:

> "Whether the clerking or the examination skills have improved, whether what we're doing is too much, not enough…I guess if there was a major problem our (department) would probably have flagged it up by now but, there's that sort of, expectation that it just carries on and carries on without any further input." (NFG1.3 NP)

A mismatch "between roles and job descriptions" was seen as a potential barrier preventing nurses, especially NPs, from using HTPA. Many NPs warned that caution was necessary when nurses expecting to use HTPA sought out NP roles as what the job specified and what a nurse actually did might not always match up. Many participants recounted situations in which nurses had expected to use HTPA but whose actual roles prevented them from using the skills:

> "…you don't necessary need HTPA skills to triage patients." (NI.8 NP)

There was a general "expectation" that prescribing was becoming the "next big push" for nurses in some hospitals. Most participants knew of nurses that had undertaken HTPA education because it was an expected prerequisite for prescribing education which many roles now expected nurses to acquire. Yet, a strong view of many nurses was that roles that needed prescribing e.g. pain clinic nurse did not use EPAS, suggesting that only history taking skills might be required.

One ward nurse shared that doctors did not expect them to be able to use HTPA skills which sometimes created confusion and uncertainty. According to this same ward nurse, doctors were "surprised" because they "don't expect to see that from a general ward nurse" suggesting perhaps that most ward nurses who have been taught HTPA might not use the skills. Not expecting ward nurses to use the skills was one reason why some participants felt doctors duplicated nurses' physical assessments. For one manager, if doctors were only "going to

duplicate" ward nurses' physical assessments, it made them query the reason for ward nurses using HTPA skills in the first place. Other participants viewed doctors' duplication as part of a doctor's professional accountability and stressed that they would not expect a doctor to prescribe any medication without undertaking their own physical examination of a patient.

Patients were seen to be equally confused if ward nurses used the skills because it seemed unexpected:

> "I'll do things that the patient goes, 'Oh the other nurse hasn't done any of that' and I'll say 'nothing wrong in that I've just done a bit more' or 'I do things slightly differently' and I'll get 'Oh okay, well no one's ever done that before'… so it can confuse the patients if I start doing things that the previous nurses haven't done because they think either I'm doing it wrong or they've been on the short end of the stick by the previous nurses." (N1.6 ward nurse)

It seems that this ward nurse is implying acute care patients might start to question the variation between ward nurses' assessments which potentially might make patients feel concerned and anxious about their safety.

Several NPs firmly believed all managers had to "buy in" and invest in nurses that have undertaken HTPA, otherwise nurses cannot deliver "the service that people are expecting", perhaps indicating that nurses perceive they have learnt HTPA skills in order to help deliver a better service.

A couple of NPs felt caught in the political crossfire between two different department's views on how nurses should use HTPA skills. These same NPs expressed concern because they did not know what type of new service they would be expected to provide when these two departments merged. One of the NP revealed feeling anxious that they might be expected to use fewer HTPA skills in order to provide a quicker new service compared to the one they currently provided. As part of their professional responsibility acute care nurses using HTPA skills should be entitled to make their own clinical decisions as to the type of HTPA skills needed to assess acutely ill patients thoroughly.

4.2.3 Theme 3: HTPA the Added value

The theme was developed to capture participants' perceptions surrounding the additional benefits in the care of acutely ill patients due to the changes in the nursing practice of acute care nurses when HTPA skills were used.

4.2.3.1 Subtheme 1: Added value for patients

Participants perceived that acute care nurses' ability to use HTPA skills impacted positively on the safety and care of acutely ill patients in hospital. The use of HTPA skills enabled acute care nurses to make changes in their nursing practice that were perceived to enhanced holistic care, continuity of care and rapid interventions in caring for acute care patients.

One strong voice among participants asserted nurses wanted to deliver the best care possible for acutely ill patients. Nurses that had the "luxury" of using HTPA skills could potentially "push care to outstanding" for acutely ill patients. Many participants felt that when nurses used HTPA they could deliver the "extra stuff" alongside their prior nursing skills which was perceived to potentially improve the standard of care in detecting and responding to clinical deterioration. The general perception was that enhanced patient experience and increased positive outcomes were due to appropriate, and timely, interventions and/or escalations when nurses used HTPA.

The continuity of care appeared vital to nurses for enhancing patients' experience in hospitals. Unlike doctors, ward nurses and some NPs maintained a constant presence in their areas of clinical specialism which appeared essential to fostering a rapport with patients. Continuity of care was deemed important by nurses to prevent acutely ill patients receiving "fragmented" episodes of care. Using HTPA skills enabled nurses to feel they were able to provide care holistically because they had the skills to undertake histories and conduct physical assessments.

Unlike doctors, nurses, especially NPs, had unique nursing skills and, combined with their HTPA skills, this was perceived to improve the standard of care delivered. Holistic care was associated with patients receiving appropriate treatments and interventions quicker as the NP could instigate HTPA until a doctor was available. In addition, some NPs' roles supported ward nurses caring for acutely ill patients by reassessing acutely ill patients to minimise the risk of further clinical deterioration. The safety of acute care patients was paramount for nurses and managers. The perception was that being able to employ HTPA skills was linked to better patient outcomes because nurses' understanding of abnormal findings was increased. This seemed to be necessary for raising nurses' awareness of any potential risk(s) for clinical deterioration that enabled nurses

to be "proactive" in the care they provided rather than "reactive" to signs of clinical deterioration. For one NP, being knowledgeable produced "better nurses" resulting in "better care for patients". Most participants thought patients felt safe and well cared for when nurses conducted thorough physical assessments:

> "…recently this patient that has come to the [name of acute area] and said…they haven't always been examined by the doctors or it's very quick, and it's always been the nurses that have done the examinations and picked up the problems…" (NFG1.4 NP).

This might indicate that nurses accepting responsibility for using HTPA might be more thorough in their physical assessments, potentially reducing the risk of overlooking any abnormalities and helping to make acutely ill patients feel they are in safe hands.

Nurses, as a profession, were widely recognised within the NHS. Acute care patients placed their faith and trust in nurses according to many participants. In one NP's experience, acutely ill patients were "so anxious coming into hospital" that nurses were seen to be better at easing anxieties and fears when using the skills because they expressed empathy. This appeared important to the NP in enhancing patients' experience because the HTPA process could be instigated promptly, thus preventing delays in waiting for doctors to be available to undertake the assessments.

Using HTPA skills to take patients' histories and physical assessments provided nurses an opportunity to engage and interact with patients. Some managers thought that patients have a preference for talking to nurses because it is an opportunity to share their worries and concerns. Doctors' direct and matter-of-fact style of communication was seen to "cut them [patients] off mid-sentence" and was regarded by participants as overlooking or dismissing patients' anxieties and health concerns, whereas nurses were perceived to listen attentively to acute care patients concerns:

> "The other day I had a patient referred, GP referred right iliac fossa pain, when patient came in they said "I actually went to the GP" because of their persistent headache and neck pain [pulls a puzzled face] "but I happened to have a bit of abdo pain and they've gone down that route"." (NFG2.1 NP)

> "Patient had been referred by his GP for dysphagia and I said 'so are you getting any

swallowing problems' and he said, 'no I don't get any swallowing problems' and he was quite definite about it. He said 'I've got this problem here' and I could hear him talking to me. I said 'your voice is changing' and he said 'that is what I've been trying to tell the GP but he sent me here'." (NFG4.2 ANP)

Listening attentively enables nurses to act as patient advocates and is an important feature of nurses' professional responsibilities.

Using HTPA skills was seen to improve nurses' documentation which participants generally regarded as being superior compared to doctor colleagues. Nurses' ability to accurately document findings, as opposed to doctors' scant notations, was perceived to benefit patient outcomes and showed that nurses adhere to their professional nursing code of conduct:

"They write ineligible scribbly handwriting and then they write "chest clear" we write "able to talk in sentences." (NFG3b.1 ANP)

For many nurses, using measurable descriptors in patients' notes was perceived to assist other colleagues in conducting any follow-up assessment of acutely ill patients and enabled any changes in patients' clinical condition to be determined, therefore more easily aiding patients' continuity of care.

4.2.3.2 Subtheme 2: Added value for nurses

The perceived benefits that acute care nurses themselves gained from being able to use HTPA skills and make changes to their nursing practice involved the recognition and response to clinical signs of deterioration, and their ability to advocate for patients. Additionally, positive emotions were perceived to increase acute care nurses' job satisfaction and gave them a sense of professional identity.

Although a few nurse participants struggled to articulate the ways in which their nursing practice had changed since using HTPA skills, most participants could recall their nursing practice prior to HTPA which they used to compare and contrast with their current nursing practice. Nurses expressed a compelling need of wanting to "do a job properly", thus indicating nurses' desire to deliver a high standard of care to acute care patients. Using HTPA was considered by nurses to increase their job satisfaction and made their job rewarding because they could be thorough in

taking their patients' histories and physical assessments.

Participants showed pride and took great pleasure that, as nurses, they were able to use HTPA to benefit the care of acutely ill patients. Even though nurses expressed explicitly that "at the end of the day" they were "still nurses aren't we" there was an awareness that nurses felt a greater sense of their professional identity. Many NPs revealed that they actively sought out such roles that enabled them to use HTPA skills because they believed that they could be doing more to make a real difference to their patient's care. Most nurses had chosen to work in their areas of clinical specialism and showed a compelling need of wanting to be able to do more for their patient's care.

Some nurses advocated the use of HTPA to their nursing colleagues in two main ways. Some nurses acted as mentors in clinical practice and, despite describing mentoring as "time consuming", "exhausting" and "intense", believed their support in developing nursing colleagues to use the skills independently was well worth their effort. Other nurses perceived themselves as being positive role models to help encourage nursing colleagues to use HTPA skills. Being a positive role model seemed important for nurses to show other nursing colleagues that they too could become clinically competent to use the skills.

"Seeing the bigger picture" was a common phrase used by the nurses. It involved the ability to recognise and respond to clinical deterioration, signifying that the safety of acute care patients remained a top priority for nurses. Many participants believed HTPA skills enabled nurses to intervene early and have a better understanding of "red flags" to reduce the risk or prevent the clinical deterioration of acute care patients. Several nurses remembered, prior to learning HTPA, feeling "frustrated" and "helpless" waiting for a doctor to be available to assess acutely ill patients whose clinical condition had worsened. For one ward nurse, they were now capable of conducting the physical assessment and felt more confident to remain at the bedside of an acutely ill patient:

> "It enables me… to identify…problems faster, it's made me more confident in assessing patients cause traditionally I would have just stood back or left something alone, whereas now I'm quite happy to go and have a look, whether I can do anything about it is another question but it enables me to settle the patient…"(NI.6 ward nurse)

Being able to remain with patients at such a time should potentially make the patients feel reassured that they are being cared for.

Seeing the bigger picture appeared to be related to decision-making. Several participants firmly believed that it was vital for NP to demonstrate to doctors their reasoning behind any decisions or recommendations made in the care of acutely ill patients. In time critical situations, NPs need to be able to make decisions decisively.

A significant change in nurses' practice involved communicating effectively with doctor colleagues. Many participants admitted that, before undertaking HTPA education, understanding the medical terminology had been difficult, but this became "demystified" after completing their course. Most NPs strongly believed that when doctors and nurses all used the same terminology it made communication between them effective which made them feel respected by the doctors, especially consultants and registrars, which appeared to build stronger collaboration between them.

Effective communication was perceived as being imperative to expedite responses from doctors in reviewing any acutely ill patients. One manager highlighted that when ward nurses reported "I'm concerned about somebody cause they're just not well" it did not convey clearly to the doctors what nurses' unease might be. On the other hand, when nurses used HTPA skills they were able to articulate their worries clearly and concisely:

> "My phone manners are…now, in that 'I have this problem you are the person I need to come and see this patient and this is why I need you to come and see this patient' and I find I very rarely get people turning round and getting 'it'll be 30 or 40 minutes before I come down to see a patient' and I'll get 'right I'll be there' because you're getting your message across in a succinct way." (NFG1.4 NP).

Nurses' use of HTPA enables them to communicate with doctors using the same terminology that results in swifter responses from doctor colleagues and brings added value to the nursing practice of acute care nurses when the skills can be used.

4.3 Conclusion

This chapter has presented the findings of this study on acute care nurses' use of HTPA in adult acute care settings. Across four NHS hospitals' acute care services participants revealed ward nurses have many barriers restricting their ability to be able to employ HTPA skills. The role of the

nurse appeared to heavily influence the frequency of HTPA used between the NP and ward nurses, and what type of skills are used and integrated within the clinical setting. Unlike physical assessment skills, the communication skills associated with history taking were core, and essential skills for all nurses. Hospitals' development and investment in educating and developing nurses in their use of HTPA skills is heavily orientated towards NP roles and not ward nurses. If ward nurses lack adequate resources to support and consolidate their development of feeling confident and competent, they are less likely to use the skills in the clinical setting. Organisational pressures and tensions surrounding firefighting and gap filling, conflict and tensions, and expectations and uncertainty further hampered acute care nurses' use of the skills. Furthermore, the ongoing retention and recruitment of nursing staff appeared to be problematic and may account for nurses now struggling to fill the gaps in their own nursing profession. There is a strong belief that, when acute care nurses use HTPA, patients receive enhanced holistic care, continuity of care and rapid interventions, all of which could improve patient outcomes. Fundamentally, ward nurses maintain a constant presence on acute care wards and would also highly benefit from being able to assess acutely ill ward patients to aid the recognition and response to signs of clinical deterioration.

Chapter 5   Discussion

This is the first UK qualitative study that has explored acute care nurses' use of both history taking and physical assessment skills with the specific aim of understanding nurses' and managers' perceptions and experiences on their use within adult acute care. The previous chapter reported the study findings, detailing nurses' and managers' perceptions and experiences of factors that influence nurses' use of the skills, how the skills influence changes to nursing practice and the perceived impact on patient care. Importantly these findings reveal new and novel insights that contextualise nurses' use of HTPA and might further illuminate some of the previous findings of other studies. In this chapter the implications of these findings are discussed in relation to acute care nurses; however, where the findings revealed variation between ward nurses and NPs' use of HTPA the dominance at times of either the ward nurses or NPs is discussed, contextualised and justified with reference to the wider literature.

5.1 Introduction

Several important new and distinct findings have emerged from this study. Many barriers concerning the role of the nurse and organisation barriers restricted or prevented acute care nurses from using HTPA. Despite this, when acute care nurses used HTPA skills they perceived the 'added value' of using these skills enabled their nursing practice to change and impact on patient care.

The discussion of key findings will be addressed in the themes outlined in the previous findings chapter; The Role of the Nurse, Organisational Barriers, and HTPA 'Added Value'.

5.1.1 Role of the Nurse

Several fundamental barriers concerning the role of the nurse were found to restrict or prevent ward nurses' use of HTPA in acute care. Importantly, these barriers provide new or novel insights of nurses' use of HTPA in clinical practice that advance knowledge gained from previous studies concerning nurses' use of physical assessment skills. Although each barrier is discussed separately, the reality seems to be there is considerable overlap of these barriers that restrict and/or prevent acute care nurses' use of HTPA. Wider literature is drawn upon to emphasise and aid my interpretation of these findings.

5.1.1.1 Lack of legitimacy.

The role of the nurse has been identified as a factor influencing nurses' ability to use physical assessment skills (Secrest et al., 2005; Giddens, 2007; Osborne et al., 2015; Douglas et al., 2015) yet how the role influences nurses' use has not been established. Furthermore, physical assessment skills have previously been cited as not a nursing responsibility, which has prevented nurses from using the skills (Douglas et al., 2015) and this was a finding in this study regarding the role of the nurse. A new and unforeseen finding was that participants singularized the ward nurse's role in lacking the legitimacy (formal responsibility) to use the skills, unlike NPs. The job descriptions of ward nurses do not specify HTPA as a legitimate responsibility, unlike NP roles. Nurses' job descriptions specify the main responsibilities of assigned duties and tasks of their particular role (NMC, 2018) that they are duty-bound to undertake. Ward nurses are therefore more likely to undertake tasks that are the legitimate responsibilities of their role, of which there are many, leaving far less dedicated time to use HTPA skills. This does not necessarily mean ward nurses cannot or might not necessarily use HTPA skills, merely that nurses' priority regarding their professional practice is to ensure they fulfil their legitimate responsibilities as required (NMC, 2018).

Legitimacy is described as the rightful exercise of authority by an individual (Open Education Sociology Dictionary, 2022), meaning legitimacy gives an individual nurse the power to exert their right to use HTPA independently. A wider study has shown that when doctors and nurses are given legitimate responsibility to use newly acquired taught knowledge, they are more likely to incorporate this new knowledge as part of their role (Nolan et al., 2012). The authors concluded that, even though these studies explored knowledge, the same principle of legitimacy is applicable to practical skills. However, it is probably far easier for an individual nurse to integrate newly acquired knowledge into their role compared to HTPA skills. A lack of legitimacy and regulation can prevent nurses from working to their full scope of practice (Kleinpell et al., 2014). Hence, wider consideration to legitimise HTPA as part of ward nurses' role is highly desirable to enable them to use the skills in the clinical setting.

Edmunds et al (2010) noted that UK nurses sought doctors' permission to use physical assessment skills which was not evident in my findings. Edmunds et al (2010) concluded that nurses with limited professional boundaries, like ward nurses, most likely sought permission due to their unfamiliarity of their scope of professional practice in using the skills. However, in light of my findings, an alternative view to consider is that nurses seek permission from doctors due to a lack

of legitimacy, as doctors have the authority to delegate HTPA to nurses (providing nurses have received appropriate education/training) giving them permission to use the skills. Authority is seen to merely give permission (Barrow and Sharma, 2019) unlike legitimacy which gives an individual nurse the power to exert their right to use HTPA independently from doctors.

The NMC and hospitals in which nurses work have the authority to change nurses' job descriptions giving nurses legitimacy to use the skills. As the findings showed, participants' opinions varied as to which ward nurse roles should have a legitimate responsibility to use HTPA skills. Currently, a combination of senior and experienced junior ward nurses would be most suitable providing greater diversity and skill mix that could improve the quality of patient care (Koopmans et al., 2018). It would be financially economical and more practical for hospital managers and educationalists to identify current ward nurses who have already undertaken HEI or in-house HTPA training/education, as potentially it could be quicker to support those ward nurses with prior knowledge of HTPA skills to develop their use of HTPA skills. At present, until more ward nurses are using HTPA skills, newly qualified nurses would be less suitable as they require a period of preceptorship to develop their practice further and gain more experience in caring for acutely ill patients.

In countries like Australia where physical assessment skills have been taught as part of student nurses' undergraduate curriculum for some considerable time, evidence has shown that establishing these skills as a nursing responsibility within the nursing profession of these countries has been inefficacious (Chapter 2). This suggests that merely teaching physical assessment skills to student nurses might be ineffective in facilitating their transference into the clinical setting. If ward nurses had the legitimacy to use HTPA skills, they could support student nurses to practice and develop the relevant HTPA, as skills outlined by the NMC (2018), throughout their clinical placement experiences. Significantly, since the introduction of HTPA in the UK's undergraduate nursing curriculum, there is a real risk that similar events of the skills not being embedded as part of student nursing practice will happen here. Certainly, any knowledge of HTPA is beneficial for nursing students, and to legitimise HTPA as part of ward nurses' role is highly desirable to help them embed HTPA skills into the practice of student nurses. The NMC and organisations have the power to influence others (Groenwald and Eldridge, 2019) and therefore would be crucial to advance the use of HTPA within the nursing profession.

5.1.1.2 Lack of autonomy and protection

Nurses have previously reported physical assessment skills as not a nursing priority (Brown et al., 1987; Douglas et al., 2015). In this study, HTPA was also viewed as not being a priority for ward nurses due to a lack of legitimacy to use HTPA. Ward nurses have to prioritise the legitimate responsibilities and tasks of their role meaning these tasks take higher priority in being completed above using HTPA skills. Yet, a new finding of this study also revealed ward nurses' priority of their patient care might not necessarily correspond with the priority of others e.g. managers. This was demonstrated by managers' priority for ward nurses to complete mandatory checklists i.e. care hours per patient day (CPPHD) over conducting a physical assessment of an acutely ill patient. All hospital adult acute care inpatient wards are required to review CPPHD, the acuity and dependency of acute care patients on a daily and shift-to-shift basis (NHS, 2021). Whilst CPPHD is a compulsory and necessary requirement, ward nurses completing such tools, as a priority to conducting a physical assessment of an acutely ill patient at risk of clinical deterioration, is concerning. Given patient safety is a key responsibility, described in the NMC's Code (2018), having time to undertake HTPA should be a priority for ward nurses.

One answer would be to delegate the responsibility of completing CPPHD to another member of the nursing team e.g. an appropriately trained HCSW or a nursing manager. Another practical solution would be to complete checklists during nursing staff handovers, as usually this provides a period of time when staff due to finish their shift overlap with those starting their shift; hence there are an extra number of nursing staff on the wards during handover periods. Equally, extending the nursing staff handover period could provide sufficient time for a ward nurse to complete checklists and still leave an adequate number of nurses working on the wards, so that if HTPA skills needed to be employed there would be enough nurses to ensure checklists and patients' physical assessment were both completed.

Autonomy in the NHS is relative and not absolute (Hardy and Conway, 1988) meaning hospital nurses' degree of autonomy is in comparison to others e.g. managers and doctors. In this study, the ward nurse role had the least degree of autonomy compared to other nurses, particularly NPs. Autonomy in this study was associated with having greater control over one's work, which ward nurses were seen to lack compared to NPs. de Oliveira et al. (2016) reported student nurses experienced a greater degree of autonomy when they were able to use the skills in the clinical setting, concluding that students were able to use the skills to help them make decisions about their patients' nursing care. It has been suggested that when ward nurses are allowed a greater

degree of autonomy in their roles, they have more control over their patients' care (Rouhi-Balasi et al., 2020). A study (Oshodi et al., 2019) found ward nurses working in the UK experienced autonomy intermittently depending on the situation and had less autonomy compared to ward nurses working in the USA. If ward nurses had the legitimacy to use HTPA it would enable them to have more control and a greater degree of autonomy to prioritise using HTPA skills when concerned about patients' clinical conditions.

UK ward nurses appear to have less involvement in their hospitals' policies and procedures, making it harder for nurses to develop a unified voice and exert influence in the organisations in which they work (Groenwald and Eldridge, 2019; Oshodi et al.,2019), possibly accounting for nurses' lesser degree of autonomy. To promote greater autonomy for ward nurses, a practical approach would be for hospital managers (clinical and non-clinical) to involve ward nurses in the wider decision-making processes and policies within their organisations. Ward nurses should be offered, supported, and encouraged to attend relevant organizational meetings, such as ward managers, matrons, and director of nursing meetings. This would provide ward nurses opportunities to raise their concerns surrounding patients' safety and care, and offer suggestions of ways to support nurses in their use of HTPA to enhance their delivery of patient care. Such meetings are usually scheduled in advance, meaning ward managers could ensure sufficient staff are rostered on duty so that ward nurses from each ward could attend; this could, in turn, help minimise potential hierarchical influences e.g. more managers than ward nurses might mean nurses will be worried about sharing concerns. Another benefit of implementing this approach means that directors of nursing might gain a better understanding of the issues that might be impacting on nurses' ability to use HTPA skills e.g. gap-filling so that practical solutions could be explored more widely at strategic meetings e.g. quality improvement.

For nurses to make complex decisions in time critical situations e.g. clinical deterioration, they need to work autonomously (Oshodi et al., 2019) as they have less time to confer with clinical colleagues. If ward nurses are unaccustomed to having higher degrees of autonomy in regard to their day-to-day patient care, the real consequence is that ward nurses might not develop the experience to make such complex decisions quickly in time-critical situations surrounding the clinical deterioration of acutely ill patients e.g. employ HTPA skills. Given the potential benefits for acutely ill patients care, there is real value in allowing ward nurses to have a greater degree of autonomy in the clinical setting. Furthermore, the NHS (2019a) vision is to equip staff with the skills and opportunities to improve patient safety, and ward nurses' ability to use HTPA could be one such strategy.

Raleigh and Allan (2016) found that ANPs needed protected time to learn physical assessment skills, which the findings of this study have expanded upon as participants perceived the lack of 'protection' as a main barrier restricting or preventing nurses' use of HTPA. For the ward nurses in this study, the lack of 'protected' time to use HTPA was related to heavy workloads and overseeing the care of multiple patients, rather than one patient at a time. Other studies have identified a lack of time as a barrier (Chapter 2). Lack of time for ward nurses to complete nursing and non-nursing tasks appears a major issue noted in the nursing literature (Aiken et al., 2001). On average, nurses reported missing four items of care per shift, with the commonest identified by 66% of nurses being the time to talk to patients (Ball et al, 2014). Studies suggest that when there are higher numbers of patients in hospital wards, nurses have less time to spend with patients (Bridges et al., 2019) which inhibits the nurse-patient relationship (Bridges et al., 2013) and contributes to missed nursing care and work left undone (Aiken et al., 2001; Ball et al., 2014). Even so, McCabe (2004) argued that nurses should focus on the quality of the time spent with their patients as longer intervals do not necessarily enhance therapeutic relationships. Currently, given the staffing issue, it is unrealistic for nurses to find more time to spend with patients; however, if nurses spent quality time e.g. less time with patients but used more effectively it might facilitate ward nurses' use of HTPA. For instance, nurses could use physical assessment and aspects of history taking communication concurrently enabling them to gain ample information in a relatively short period of time. Furthermore, combining both skills of history taking and physical assessment could enable nurses to integrate the skills when undertaking other elements of nursing care that might assist nurses to consider possible potential problems earlier.

5.1.1.3 Purpose to use HTPA

The reason to use HTPA skills has featured heavily in prior findings such as Secrest et al (2005) who felt that if nurses used physical assessment skills it would enable them to provide better patient care. Later studies, particularly Australian studies, have stressed the need for physical assessment skills to aid nurses' detection of clinical deterioration. The need for ward nurses to use HTPA skills in this study surrounded benefits to the recognition and response to clinical deterioration. Previous debate has centred on whether ward nurses need only to use the skills to recognise clinical deterioration and escalate and report their concerns, or to be able to identify abnormal findings to aid a nursing or medical diagnosis (Secrest et al., 2005; Baid, 2006). Fundamentally, being able to recognise clinical deterioration first and foremost is the most important part for ward nurses, as the main priority is to be able to escalate concerns to minimise

the risk of further clinical deterioration. Currently, whether a ward nurse can identify what the cause of an abnormal finding might be is less essential but over time, if the skills become embedded within the nursing profession, ward nurses could develop the ability to identify abnormal findings to aid a diagnosis. Importantly, ward nurses should be able to report their findings, verbally and by documenting, otherwise, they are far less likely to use the skills. This is because nurses are responsible for undertaking accurate patient assessments (NMC, 2018). It was evident in the findings of managers' accounts as ward nurses that when they need to use HTPA e.g. when concerned about patients' clinical condition unless they knew what an abnormal finding was i.e. differentiate, ward nurses are probably less likely to use the skills. This means that nurses are working within the scope of their practice by not using HTPA because they might feel less capable of making an accurate assessment. There is no doubt that an understanding of the underlying theory of HTPA is a critical part of NP roles that requires them to make a diagnosis; however, for the ward nurses the primary urgency is escalating concerns so that patients receive appropriate timely interventions.

5.1.2 Competence and confidence

Confidence has previously been identified as a negative and positive factor in influencing nurses' use of physical assessment skills. Confidence has received greater acknowledgment compared to competence (Chapter 2) which is surprising given nurses are responsible for ensuring they are competent in their ability to undertake tasks. Confidence can be regarded as being certain of your abilities whereas competence is the ability to do something well (Cambridge Dictionary, n.d.a.). The findings of this study revealed feelings of confidence and competence appear inextricably linked and participants sometimes used the terms interchangeably. Feeling less confident and competent were vital factors severely impeding or preventing ward nurses from using HTPA skills fully. Significantly, confidence must be considered with competence as over time an individual's ratio of confidence and competence varies (Gottlieb et al., 2022), seemingly causing feelings of confidence and competence to fluctuate in the same or opposing directions. This is akin to the confidence and competence matrix as shown in Figure 8 where an individual's feelings of confidence and competence can fluctuate as was evidenced in the findings of this study. The competence-confidence matrix has its origin in business and is designed for team leaders as well as employees, but seemingly applicable in healthcare settings. The matrix is a practical tool used to support effective coaching techniques to develop and improve employees' performance by concentrating on what each individual employee needs most (Hunt and Dye, 2021). The premise of the confidence-competence matrix is that if an individual believes they can do something

(confidence) they will take action to do it (competence) which increases their feeling of competence, which then increases their feeling of confidence, and so on. Thus, the feeling of confidence appears to initiate the confidence-competence matrix; however, feelings of confidence and competence can decrease as was noted in participants' accounts of HTPA being lost and forgotten, causing them to feel less confident and competent to use the skills.

Figure 8: Confidence and Competence Matrix (Let's grow leaders, 2022)

Awareness of the confidence-competence matrix could be beneficial for nurses learning and developing HTPA skills as well as those involved in supporting them, including clinical mentors and educationalists (in clinical practice and classroom settings). The confidence-competence matrix could be used by nurses to identify where they would position themselves to help them seek relevant support from mentors or educationalists e.g. coach me. Equally, when not on a course, nurses might not have access to clinical mentors and educationalists, so these nurses could use the matrix in seeking support from others e.g. NPs, peers, managers, and doctors. Knowledge of the confidence and competence matrix could enable nurses and those involved in supporting nurses to develop HTPA skills to understand different combinations of high/low confidence/competence and understand why confidence-competence fluctuates. Beneficially, the application of the matrix could support individual nurses to develop their feelings of confidence and competence, ultimately aiding greater success in transferring the skills into the clinical setting, and crucially maintaining them.

One of the main factors influencing ward nurses' feelings of confidence and competence in using

HTPA is the lack of appropriate mentor support in the clinical setting, unlike NPs and especially for trainee ANPs. Trainee ANPs are usually undertaking postgraduate programmes and are normally well supported in the clinical setting with allocated mentors to supervise their practice of HTPA skills. Furthermore, ward nurses might not know where to access appropriate mentor support which might also prevent them from being able to develop the use of the skills in clinical practice. According to Vygotsky's (1986) social learning theory, when an individual e.g. ward nurse lacks appropriate support to aid their development and learning they are less likely to fully develop their ability to use HTPA in the clinical setting. Vygotsky postulated that individuals who are left alone will develop but not attain their full potential. Importantly, Vygotsky distinguished the gap between an individual's potential and actual learning as the zone of proximal development (ZPD), therefore supporting nurses' development through collaboration with senior colleagues (doctors, NPs) is pivotal for an individual nurse to reduce the ZPD gap. Although Vygotsky was concerned with a child's learning there are nursing studies (Sanders et al. 2005; Lillekroken, 2019) that have adopted or related his approach to student nurses' learning of skills.

The integration of knowledge and skills in clinical settings is an important part of nursing competency and core to providing patient care (Fukada, 2018). Supervision can be regarded as a continual process that aims to support and develop an individual's competency of knowledge, skills, and attitudes (Davenport, 2013; Health & Care Professions Council (HCPC), 2022). Hence, supervision is significant to the development and maintenance of registered healthcare professionals' competency (NHS Employers, 2022) such as HTPA in clinical settings. Although there are different types and functions of supervision (HCPC, 2022) the supervisory relationship is considered crucial for supervision to be effective (Pritchard, 1995; Rothwell et al., 2021). A trusting relationship can lessen supervisees' apprehension and anxiety, as well as encouraging positive feelings, and developing values and knowledge during supervision (Rothwell et al., 2021); working alongside supervisors can promote a safe and supportive environment that is conducive to supervisees' learning (Lofmark et al., 2001; Rothwell et al., 2021). In contrast, Landmark et al. (2003) found that hierarchical or negative supervisory relationships made student nurses feel less confident in their ability to learn. This suggests that positive and equal supervisory relationships could help acute care nurses to feel more confident to learn and develop their use of HTPA skills in the clinical setting. Additionally, supervisors provide opportunities to practice skills which in turn helps supervisees to develop their confidence to practise skills and to become more independent in their learning (Carver et al., 2014). However, busy clinical settings, heavy workloads and insufficient staffing numbers means there is a lack of time for supervision (Rothwell et al., 2021). Despite these challenges, effective supervision can aid in the development

of acute care nurses' confidence and competency to use HTPA in their clinical setting.

Confidence is influenced by many factors, external and internal, that shape how an individual behaves (Gottlieb et al., 2022). Even though the concept of motivation is aimed at enhancing employees' efforts in their performance at work and links with role theory (Hardy and Conway, 1988), motivational factors and confidence are seen as being interrelated (Dixon, 2008). This may account for the finding in this study of motivation being identified as a personal attribute that aided nurses in their development of HTPA. Given prior studies on physical assessment have been undertaken by educationalists (Chapter 2), interestingly, the motivation to learn or develop the use of skills has not been previously acknowledged as a factor influencing one's feeling of confidence and competence.

Numerous theories of motivation exist e.g. Maslow's, McCelland's, and Herzberg's meaning it is neither possible nor the intent of this discussion to address differences in these theories. However, awareness of different motivational theories might be important for managers and nurses to help recognise what factors might encourage an individual nurse to develop their use of HTPA skills. Intrinsic motivation occurs when an individual is motivated by enjoyment or personal satisfaction whereas extrinsic motivation occurs from rewards or fear of punishments. A few of these motivational factors emerged in the findings showing participants' diverging views, including receiving compliments from doctors after conducting physical assessments, attaining their dream job (goal) having completed their HTPA education, and financial rewards for having additional responsibilities. Targeting managers' awareness of motivational factors is in line with the change model framework for sustainable change (NHS, 2012), assuming that managers themselves are aware of varied motivational theories to establish ways to increase a nurse's motivation. Significantly, the framework recommends both intrinsic and extrinsic motivational factors should work in harmony otherwise change is deemed less successful (NHS, 2012) meaning ward nurses might be less likely to transfer the learning of HTPA into the clinical setting effectively.

The fear of making a mistake and being afraid of getting it wrong were associated with feelings of confidence and competence in this study and expands on prior findings identifying fear of a mistake as a barrier preventing nurses from using the skills (Chapter 2). The fear of making mistakes is not uncommon in the healthcare system and any isolated incidences, unless extremely severe, are usually managed by focusing on supporting and developing an individual's learning. Nurses are required to maintain an acceptable standard of competencies (NMC, 2018). The

findings in this study indicated that the fear of a mistake surrounded the ward nurses not being able to accurately recognise or identify abnormal findings. Aldridge-Bent (2011) noted that district nurses expressed concerns surrounding competency but did not elaborate as to what these concerns might be. Findings in this study revealed ward nurses were deemed to not use HTPA due to a lack of feeling competent or not being assessed as being clinically competent. Competence, in preserving patient safety, is a key professional nursing standard (NMC, 2018:15) that places great emphasis on nurses to "accurately identify, observe, and assess signs of normal and worsening physical and mental health" of all patients. It is therefore highly reasonable that since ward nurses lack the support to develop HTPA in the clinical setting, in order to work safely within their professional scope of practice, ward nurses are unlikely to use HTPA because they recognise that they are not competent in their ability to use the skills. Likewise, the inability to accurately document abnormal findings was seen to prevent the ward nurses from using HTPA skills in this study. This differs from prior studies that reported a lack of time to document physical assessment findings prevented nurses from using the skills (Douglas et al. (2015). These findings are important as they demonstrate that the ward nurses appear to be cognizant of the limitations in using HTPA as part of their professional practice, which offers a fresh perspective to Edmunds et al's. (2010) inference that cardiac care nurses lacked an understanding of their professional boundaries in using physical assessment skills which was seen to be the reason restricting nurses' use of these skills.

Being deemed clinically competent is an essential requirement of nurses regarding their standards of professional practice, yet successfully attaining in-house clinical competencies was challenging as highlighted by NPs. If NPs themselves struggle to complete the required competencies, then it is most likely a key barrier for ward nurses who lack the support and opportunities to practice their development of HTPA skills. A viable solution is for hospital educationalists to ensure criteria for completing in-house competencies are realistic. This could be easily achieved by creating different clinical competencies for the ward nurses compared to NPs. Equally, the findings alluded to the majority of in-house competencies concentrating on nurses being assessed in performing physical assessments before being signed off by clinical mentors. Given the importance of history taking, in terms of gathering relevant information from patients as it directs nurses to where to focus any subsequent physical examination, it would be worth including key features of history taking targeting effective communication (documentation and verbal communication) as part of in-house competencies.

Attaining clinical competency of HTPA skills, and being seen to be credible, was important to the nurses in this study, particularly for those working in 'advanced' roles. The assessment of clinical skills is complex and challenging (Ward and Wallis, 2006) and therefore probably accounts for the variation in the ways that competency is assessed by HEIs that deliver HTPA education. Methods used to assess clinical skills include direct observation in clinical placements, compilation of portfolios of evidence, clinical assessment documents, critical incident reports, reflection, video or audiotapes of nurse-patient interactions and simulated patient encounters in skills laboratories such as the objective structured clinical examination (OSCE), making the assessment of clinical skills complex and challenging (Ward and Wallis, 2006; Reljic et al., 2010). The OSCE, as an assessment method, is regarded by McWilliam and Botwinskil (2010) to focus on providing individuals with constructive feedback of their demonstration of the skills and helps identify the strengths and weaknesses of an individual's performance of a skill. The OSCE can assess the standard to which an individual is able to perform a skill at that set point in time. However, this does not necessarily equate as being clinically competent in the use of HTPA, as this may take individuals considerably longer to attain, or result in nurses feeling less confident and competent to use HTPA skills in the clinical setting after completing their HTPA education.

Reflection is conducive to develop critical thinking, and although crucial to nursing, it lacks the ability to observe an individual perform HTPA skills. Therefore, rather than a single method of assessment, some HEIs use a combination of methods to assess individuals e.g. OSCE and clinical assessment documents, because multiple methods allow more aspects of knowledge, skills and attitudes to be assessed. Furthermore, methods such as clinical assessment documents often require an individual to complete them over a period of time, alongside support from a supervisor/mentor in clinical practice. This means that an individual's feeling of confidence and competence should develop to enable nurses to feel confident and competent to use the skills after completing their HTPA education. However, the use of clinical assessment documents requires individuals to have access to mentor/supervisor support, which might not be possible for all nurses, as evidenced by the findings that the ward nurses struggled to gain access to mentor support. It is most likely that all methods of assessment have pros and cons. Awareness of the different assessment methods and the potential impact in developing nurses' feelings of confidence and competence to use HTPA skills during their HTPA education could be valuable for educationalists.

5.2 Organisational Pressures and Tensions

Three main organisational pressures and tensions hampered acute care nurses in their ability to

use HTPA, and they involved 'firefighting' and 'gap-filling', conflicts and tensions, and expectations and uncertainty.

5.2.1 Firefighting and Gap-filling

'Firefighting' captured participants' views of ward nurses' excessive workload as one of the main organisational barriers restricting them from using HTPA which is a new finding to emerge in this study. Nursing workload has been reported previously as a barrier preventing the use of physical assessment skills (Chapter 2). The excessive workload in the NHS is now deemed chronic (House of Commons Health and Social Care Committee's report (HCHSCC), 2021) most likely in recognition of its longstanding and problematic existence. Too many competing tasks restricted the ward nurses in their use of the skills and, to maintain patient safety, they delegated the tasks of using HTPA back to the doctors. Appropriate delegation of tasks is a fundamental nursing responsibility and a way to offload tasks (task shifting) to others, enabling the continuation of well-organised acute care services in hospitals. Furthermore, task shifting can occur from nurses in positions of higher seniority to lower and vice versa, or horizontal, meaning shifting tasks to a colleague of the same working grade banding. Even though barriers associated with the ward nurse role might contribute to their decision making to delegate HTPA to the doctors or NPs over delegating a lower-skilled nursing task to another nurse or HCSW, the finding did not reveal full insight into the reasons for this. It is quite possible that ward nurses might decide to delegate to doctors because they are concerned about a patient's clinical condition or because a doctor will still need to review the patient. Equally, by delegating HTPA to another healthcare professional such as a doctor, this will unburden the task of using HTPA from a nurse's workload. On the other hand, delegating a lower-skilled task to another ward nurse or HCSW means taking up the additional task of HTPA, potentially increasing the workload across the nursing team. Further studies to understand more about ward nurses' decision-making surrounding the use of HTPA may be of value to gain greater insight.

When a person's role has too many tasks to accomplish in the time available or if they lack the resources to perform their role fully, role overload can occur (Creary and Gordon, 2016) as indicated by ward nurses' excessive workload in the findings of this study. Frontline staff, such as nurses, have been labelled as 'shock absorbers' (The Point of Care Foundation, 2017) because they take on the full pressure and strain of the workload by maintaining a constant presence in acute care wards. Unresolved role overload can cause nurses to experience stress and strain which can lead to role strain causing individuals to feel ill. In the literature, Lambert and Lambert

(2001) highlighted that UK research on nurses' role stress and strain has previously been second highest to nurses in the USA, and the research focused on work environment factors including the perceived lowering of standards of patient care, increased documentation, understaffing, and increased workload.

Nursing workload depends on the amount of work given to nurses to undertake throughout their shift, but the workload is seen as difficult to define as nurses experience varying levels of workload due to different contextual factors e.g. patient acuity, patient dependency, and lack of equipment (Lang et al., 2004; van der Oetelaar et al., 2016). Therefore, ensuring optimal nursing numbers of staff on the ward is challenging and complex, especially when the acuity and dependency of an individual patient might change throughout a shift. However, evidence continues to show excessive workloads adversely impact patient safety as there are fewer nurses to spread the workload across the remaining nurses on shift, contributing to increased job dissatisfaction. In turn, decreased satisfaction can cause low morale to impact deleteriously on the retention and attrition of nurses (Lang et al., 2004; van der Oetelaar et al., 2016). Sherman et al.'s (2011) quantitative study examined leadership qualities amongst 354 acute care senior (charge) nurses and found their responsibility to keep patients and families satisfied, time to manage team conflicts, delegate tasks to others, maintain the safety of patients, mentoring and supervising, and communicating with doctors was constantly challenging with the changing pace and delivery of acute care services. Furthermore, 34% of 354 nurses indicated that role stress was a key factor that would prevent them from seeking higher managerial positions, indicating that senior ward nurses using HTPA might be more susceptible to role overload given the additional responsibilities already associated with their roles. Making the protection of senior nurses a priority to explore could be beneficial to facilitate their use of HTPA skills.

The micro-management of nurses is an important finding in this study, and has not been previously noted, probably because few HTPA studies have explored contextual factors. Micro-management suggests that nurses, especially ward nurses, are unable to function with any degree of autonomy. Evidence shows ward managers with a transformational leadership style could have positive influences on the working environment (Brewer et al., 2016). If managers create conditions that are favourable to encourage nurses to exert greater control on their own practice it could make the ward nurses feel they have a greater degree of autonomy. Managers could determine their current management style and consider ways in which they could foster positive conditions. Whilst it might be more challenging for individual managers to adopt or lean towards a transformational leadership style, the potential impact for nurses' increased job satisfaction

could be a viable and realistic approach aimed at retaining current nursing staff.

Aikens et al (2013) reported only 11% of 2990 nurses in England identified having a good working relationship with doctors and 23% of nurses thought there was teamwork between the two different professions. However, nurses do not always feel free to question the decisions or actions of those in authority; 34% of nurses noted patient surveillance tasks were left undone and 66% of nurses identified that tasks left undone were related to comforting or talking with patients.

Nurses acting as 'gap-fillers' within the NHS is not unusual but was another new finding that adds greater context to nurses' use of HTPA and the existing evidence identifying nurses' heavy workload, lack of time, and documentation as barriers preventing the use of physical assessment skills (Chapter 2). Hospital nurses working in acute care have previously reported performing non-nursing tasks, such as cleaning rooms, escorting patients, and performing ancillary services at the detriment of nursing tasks left undone (Aiken et al., 2001). High attrition rates affecting clinical and non-clinical staff e.g. porters across the NHS are compounding issues around staffing shortages e.g. patient safety (HCHSCC, 2021). Ward nurses have most likely been the staple, core gap fillers in hospitals, taking on whatever tasks or roles of others have been necessary to ensure acutely ill patient's care needs and safety are maintained, as alluded to in the findings of this study. Nevertheless, ward nurses themselves now appear to be at a crisis point, evidenced by the finding of ward nurses struggling to get through the shift and keep patients safe. Since the ward nurses have historically filled the gaps, this might be why there was less emphasis in the finding on ward nurses acting as gap fillers compared to NPs.

Of concern was a different finding surrounding the vulnerability of NPs working in nursing teams and being delegated the tasks of others e.g. phlebotomists, preventing them from being able to employ their HTPA skills. In such situations, when an individual performs the tasks of others that are below their skill set it is regarded as role overqualification (Hardy and Conway, 1988). The concept of role overqualification has been associated with employees' negative attitudes in the workplace (Erdogan and Bauer, 2009) and can result in individuals feeling that the task or job they are performing is beneath them (Erdogan and Bauer, 2020). Whilst delegation and task substitution are necessary for large organisations, like hospitals, there becomes a point if it is occurring on a regular basis that NPs will become dissatisfied. Ultimately, if NPs are prevented from using HTPA skills it may well cause them to seek out alternative roles (jobs). In the current staffing crisis there are no immediate solutions around the delegation of tasks; however, managers could ensure that NPs are evenly rotated to take turns in being delegated others' tasks,

possibly lessening any feelings of dissatisfaction.

Gap filling and firefighting appear to be in a vicious cycle as each precipitates the other, and, ominously, until this cycle is broken it seems likely to persist. Possibly at the crux of the whole problem surrounding nurses acting as gap fillers and experiencing excessive workloads involves the shifting of tasks from one professional to another. Additionally, other HCP and ancillary staffing issues need to be resolved as this will ease the pressure placed on nurses in frequently having to undertake the tasks of others. Furthermore, the improvement resource for adult inpatients in acute hospitals (National Quality Board, 2018) sets out requirements for safe, sustainable, and productive staffing developing on the agenda (2016) of the right staff, the right skills, in the right place and time. One focus of the retention and recruitment of nurses aimed at managers is to understand what motivates nurses to remain in their jobs, though unless clinical managers have received the necessary support to explore motivation it could be quite challenging for them to undertake.

5.2.2 Role Ambiguity

Blurred working boundaries as a result of using physical assessment skills has been an ongoing issue seen to hamper nurses' use of the skills (Chapter 2). Birks et al. (2013) claimed that with other professions using physical skills e.g. physiotherapists and pharmacists, albeit for different reasons, it is becoming less clear for the ward nurses to determine whose role (doctor, nurse, and physiotherapist) has the responsibility to use the skills. Unclear and uncertain expectations of using HTPA in the clinical setting were evident in ward nurse participants' findings of this study. When nurses undertake additional training for work e.g. attend HTPA education, and lack support to use the skills in the workplace they may experience role ambiguity (McCormack and Cotter, 2013). A finding in this study indicated that ward nurses may be left feeling unclear or uncertain about what to do having learned HTPA skills. When an employee understands the reason or benefit of why training, such as HTPA education, is required they are said to be clearer about what is expected of them (Bellamkonda, 2021). Furthermore, as Edmunds et al. (2010) indicated when the skills form an expected part of nurses' roles, the skills are more likely to be used.

Role confusion is recognised as the fifth of eight stages of adolescence development proposed by Erik Erikson (Orenstein and Lewis, 2022). Simply put individuals need some degree of freedom to make choices, but not too much freedom otherwise making a choice becomes too difficult for them to make a decision. Syed and McLean (2017) stressed that Erikson's use of adolescent stages

has been misconstrued and go on to acknowledge all eight stages exist within individuals throughout their lifetime, but certain stages may become prominent at different periods of their life. Thus, the principle of Erikson's fifth stage share similarities with the participants' accounts in this study. For example, a lack of clear boundaries about the use of HTPA can result in ward nurses being unsure of how HTPA skills fit into their role at work. Role confusion can make individuals feel disappointed (Orenstein and Lewis, 2022) which has similarities with participants expressing 'regret' about not being able to use HTPA skills or maximize the skill's full potential. A few NPs were vulnerable to role confusion due to using HTPA as evidenced by their accounts in the findings. It may be that, as a consequence of using HTPA, some NPs are becoming less clear about their professional boundaries, which might account for NPs' frustration in not being able to request certain investigations. Nursing literature on role confusion has centred on nurses in advanced roles indicating that they experienced feelings of frustration that lead to role confusion.

Managers themselves may be unaware of what HTPA education entails e.g. learning theory and skills, and therefore do not have any expectations of their ward nurses to use the skills in the clinical setting. This might be because the majority of HEI education undertaken by nurses is generally theoretical, meaning that usually a nurse could independently transfer their learning from the classroom into the clinical setting without the support of their manager, unlike HTPA education. Hospital educationalists could liaise more closely with managers to help raise their awareness of what HTPA education involves and develop collaborative approaches to support ward nurses' development of HTPA skills.

Equally, some participants revealed in this study that HTPA skills were a prerequisite to being able to register for higher education institutes' prescribing courses. Whilst this was not noted as a barrier or factor influencing nurses' use of HTPA it did emerge as an incentive for ward nurses to attend and complete higher education institute (HEI) HTPA courses. Significantly, the NMC (2018) entry criteria for nurses to register for a prescribing course have changed since this study was undertaken. Individual nurses must now meet the requirements set out by their chosen approved education institute by demonstrating they have the necessary skills in health assessment (HTPA, etc), diagnostics, planning, management, and evaluation of care. As a result, it is quite possible that this could impact on the number of future ward nurses attending HEI HTPA education, potentially meaning numbers may decline. Furthermore, Aldridge-Bent (2011) advocated for greater clarity around defining physical assessment skills in relation to nursing practice, albeit with a strong focus aimed at advanced practice. However, it may well now be time for the nursing profession e.g. the NMC, to make a clear distinction between NPs' and ward nurses'

responsibilities and purpose in using HTPA i.e. ward nurses do not need to use the skills to inform a diagnosis, merely to augment their assessment skills to aid the recognition and response to clinical deterioration.

Preventing role ambiguity requires both managers and nurses to mutually share responsibility in discussing expectations. Ideally, nurses and managers should have discussions and conversations well in advance of nurses registering for any formal HTPA education. Anecdotally, based on my own experience, there have been times when an individual nurse has attended our module at short notice, often taking the place of another colleague who might no longer be able to attend. In such situations, this causes insufficient time for managers and nurses to have open conversations about expectations.

Role conflict causes an individual to feel they are being pulled in different directions as inferred in the findings of NPs' descriptions of being "pulled" and "peeled" away from being able to use HTPA skills. Role conflict arises in two main forms; first, intra-role conflict is described as incompatible demands within the same role (Encyclopedia, n.d.a a) that can occur when ward nurses want to use HTPA but are unable to due to a lack of legitimacy, autonomy, and excessive workloads. Likewise, intra-role conflict can occur when NPs are delegated the task of others as implied in the findings. Second, inter-role conflict happens when an individual in one role experiences the feeling of opposing expectations (Encyclopedia, n.d.a b). For instance, NPs may expect managers to support them to use HTPA skills and not expect to be delegated the tasks of others. Nevertheless, managers may need to delegate the tasks of others to NPs to ensure the acute care services that they oversee are operating smoothly. In such situations, it may result in NPs feeling inter-role conflict from these two opposing expectations.

Aldridge-Bent (2011) noted DNs' expressed concern as to how their competency of physical assessment skills could be maintained which the findings in this study have expanded on more fully; NPs made clear that maintaining clinical competency of HTPA should be a shared responsibility between them and their employer, and that their employers should provide annual HTPA updates. Ongoing maintenance and development are fundamental for acute care nurses, especially ward nurses, who might otherwise lack opportunities to routinely use HTPA skills in their daily practice. A finding in my study revealed nurses were just being left to get on with using HTPA skills which resonates with role stagnation, in which an individual feels struck in the same role with no opportunity to progress or further their development of HTPA. A lack of opportunities for individual growth contributes to role stagnation and can be a significant cause of

stress among nurses (Purohit and Vasava, 2017). Purohit and Vasava (2017) noted that as nurses experience higher levels of stress due to stagnation of their role, it can lead to decreased job satisfaction.

5.3 HTPA Added Value

Participants perceived nurses' ability to use HTPA enabled their nursing practice to change and impacted positively on acute patients care.

5.3.1 Patient value

The perceived benefits for patient care have included better patient relationships, holistic care, and effective communication when physical assessment skills were used by student nurses (de Oliveira et al., 2016). Nursing care is often delivered according to set tasks and routines indicating that the holistic care needs of patients can go unnoticed (Olive, 2003; Lake et al., 2023). In this study being able to use HTPA skills was important to NPs as the skills enabled them to assess patients holistically to aid their continuity of care. Student nurses found undertaking physical assessments enabled them to view 'patients as a whole' which aided the nursing process (de Oliveira et al., 2016). When nurses provide care holistically, nurses' depth of understanding of their patients' care needs improves (Zamanzadeh et al, 2015) and it may be that nurses, particularly NPs in this study, had a better appreciation of their patients' care needs as a result of being able to use HTPA. Furthermore, NHS England (2014a) is a staunch supporter of nurses delivering patient-centred care advocating patient choice and holistic care, and using HTPA skills could enable nurses to achieve this.

Patient experience is fundamental to driving quality improvements in the NHS (2014a). Qualitative studies have noted that, when nurses perform a physical assessment, they perceived their patient care improved (Chapter 2). It was evidenced in the findings of this study that utilising HTPA skills enabled NPs to listen more attentively to patients' concerns and helped gain patients' trust, which was important to nurses. Kieft et al. (2014) found that when nurses spend time listening to their patients concerns it can foster trustful relationships. Fakar-Movahedi et al. (2016) explored communication in enhancing relationships between nurses and patients and found positive communication involved caring attention and building trust, both of which are important parts of the therapeutic process. It may be that, when NPs use HTPA skills, they have more physical contact and the opportunity to engage in conversations with patients, which enables them to develop a rapport that could enhance the experience of acutely ill patients in

hospitals. Using physical skills requires student nurses to touch and speak with patients which develops better nurse-patient relationships (de Oliveira et al., 2016).

Tang et al (2017) found nurses and doctors acknowledged communication needs to be more effective between these two professions. Acute care nurses' ability to understand medical terminology was an important finding in this study to aid effective communication between them and doctors. Earlier studies have identified understanding medical terminology aided nurses' ability to interpret patients' results and understand doctors' instructions (Chapter 2). Communicating using the same HTPA medical language could minimise ambiguity and be a channel of communication allowing each profession to better understand one another. The ability to use medical terminology was seen to prompt swifter responses from doctors when nurses were concerned about patients' clinical conditions. Using medical language has the potential to promote rapid and timely interventions for acutely ill patients and potentially minimise the risk of further clinical deterioration. Enhanced communication and collaborative approaches can improve working relationships to deliver better patient experiences (NHS, 2014b).

Nurses have found some doctors' attitudes dismissive, perceiving nurses' information about patients as being less relevant to patient care (Tang et al., 2017). This contrasts with the views of nurse participants in this study, who felt doctors valued their input surrounding acute patients' care needs. Furthermore, participants in this study felt it was important for them to know what information is relevant for doctors. History taking was an essential skill for all nurses in this study so that they could elicit the relevant information from patients that the doctors would require. Doctors have described reviewing ward patients as a 'snapshot' in time and rely on the ward nurses to give them detailed relevant information about significant changes in patients' clinical conditions, but doctors found that the ward nurses struggled to articulate their concerns or describe patients' assessment conditions in any detail (Tang et al., 2017). If nurses use HTPA skills it would potentially enable them to provide the doctors with relevant detailed information to assist appropriate and timely responses and interventions from doctors.

Accurate documentation and record keeping are an integral and important part of nurses' professional practice (NMC, 2018). The lack of documentation for nurses to record findings has previously been identified as a barrier preventing nurses' use of physical skills (Chapter 2). Evidence has shown that nurses capability to accurately report patient problems and clinical conditions are fundamental to patient safety (Paans et al., 2010) and aids continuity of care (NMC, 2018). In the findings of this study, NPs described significant changes in their documentation as a

result of using HTPA that aided their patients' continuity of care. This is even though Bahr and Weiss (2019) pointed out that views of what constitutes continuity of care within hospital settings is varied across the literature from including staffing variables, quality of communication, relationships, coordinated activities and the concept of time. Their review identified continuity of care was related to time, place and patient engaging relationships (patient centred).

5.3.2 Nurse value

Rapid interventions and escalating concerns were important findings in this study and gave more insight of the impact that HTPA can make in assisting nurses' ability to recognise and respond to clinical deterioration. Whilst a few earlier studies have related the value of the skills in aiding nurses' assessment of clinical deterioration, most studies have only identified what skills in acute settings were used most frequently (Birks et al., 2013; Douglas et al., 2015). Massey et al's. (2017) review of nurses' recognition and response to clinical deterioration identified nurses assessing and knowing the patient and education were key factors in recognizing signs of deterioration, which has similarities with the finding in this study. Vital signs are commonly relied on by nurses, quantifiably reporting and escalating their concerns about patients' clinical conditions. However, NPs in this study were able to clearly articulate and expand in greater depth on the detail of abnormal findings, which meant appropriate interventions could be implemented more quickly. An earlier UK study, Aldridge-Bent (2011) acknowledged nurses are able to report findings accurately to doctors and GPs to assist in delivering care interventions.

Nurses have reported increased confidence in escalating concerns as a result of conducting a physical assessment (Brown et al., 1987). Likewise in this study individual nurses' feelings of confidence and competence were important for them to be able to make credible referrals in escalating concerns, or to respond to signs of clinical deterioration. Wider evidence shows that, when nurses rely on vital signs and basic physical assessment skills, they experience negative emotions such as anxiety, panic, and fear of being reprimanded, ridiculed and being made to feel less credible in responding to patients' clinical deterioration (Massey et al., 2017). One possible explanation for this different finding in my study is that relevant knowledge of HTPA probably enables nurses to gather more subjective and objective data about patients' clinical conditions to report to doctors. Therefore, the data gathered when using HTPA skills extends far beyond basic assessment and vital signs and hence nurses may feel more credible in reporting and escalating their concerns of patients' conditions. HTPA are clearly valuable skills and could assist ward nurses in feeling confident and competent to recognise and respond to the clinical deterioration of

acutely ill patients.

Seeing the bigger picture was a different finding to emerge surrounding the relevant knowledge of HTPA skills that nurses, especially NPs, had acquired and learned which is not apparent in prior studies (Chapter 2). Seeing the bigger picture could be linked to the 'proficient' level of Dreyfus's model of skill acquisition (1986) which typifies that proficient performers perceive situations as 'wholes', providing experience has been assimilated in situational discriminations; this means that individuals must have experienced similar past situations to aid association with their present situations. Patricia Benner (2004) extended the Dreyfus model in her novice to expert nursing theory of how nurses acquire knowledge, referencing a proficient level as nurses 'holistic' understanding to reflect a much deeper grasp of the situation. Nurse participants in this study were all senior or experienced nurses suggesting that they are likely to be at proficient, or expert, levels with regards to their nursing practice. Furthermore, many NP participants had been using HTPA skills for several years. Taken together it could be a possible explanation for some NPs' explanation that HTPA skills enables them to 'see the bigger picture' in terms of having a greater understanding of potential and actual problems and risks associated with their patients' care.

The literature appears scant on 'seeing the bigger picture'; however, the authors of one paper (Sørensen and Hall, 2011) felt that 'seeing the bigger picture' related to knowledge and involved nurses 'preparedness' of knowing what to do in critical clinical situations e.g. deterioration. The interpretations of this paper must be viewed cautiously, however, as they did not make explicit how these new findings emerged from their prior independent studies (Hall, 2001; Sørensen et al., 2011). Nonetheless, aspects related to nurses 'preparedness' may share a similarity with NP in this study e.g. the ability to be proactive rather than reactive in the care of acutely ill patients. Seeing the bigger picture is possibly an area of interest for future research as it is not clear what factors contribute toward nurses seeing the bigger picture. Overall, when HTPA are used in the clinical setting, there are many perceived benefits for nurses and patients.

5.4 Conclusion

The role of the nurse is pivotal in influencing acute care nurses' use of HTPA. Unlike NPs, ward nurses lack the legitimacy to use HTPA and as a result are far less likely to use HTPA skills due to fulfilling the legitimate responsibilities and tasks of their role. The lack of autonomy and protection to use HTPA makes it difficult for ward nurses to be able to prioritise the use of HTPA over other nursing tasks, meaning they are less likely to use the skills to assess acutely ill patients.

Due to the lack of support in developing their feelings of confidence and competence, ward nurses are unlikely to use HTPA, indicating that they work safely within their professional scope of practice. Organisational pressures and tensions of firefighting, gap filling and role ambiguity create additional barriers that hamper acute care nurses' use of HTPA skills. Perceived changes to nurses' practice and impact on patient care when acute care nurses use HTPA is seen to bring added value to patient care.

Chapter 6   Conclusions and Implications

This qualitative study commenced with the desire to explore acute care nurses' use of HTPA in adult acute care settings and factors that influence their use of the skills, perceived changes to nursing practice, and impacts on patient care. Chapter 1 set the scene for the thesis around acute care nursing and issues pertinent to nurses' recognition and response to clinical deterioration and the rationale for finding out more about nurses' use of HTPA. The literature review in chapter 2 highlighted that nurses use few taught physical assessment skills and identified barriers that were seen to prevent nurses from using HTPA in the clinical setting, revealing that little is known about how and why these barriers influence nurses' use of the skills. Furthermore, evidence had started to show that when nurses used HTPA there are perceived benefits to patients' care and their nursing practice. The design and methodology of the study are detailed in chapter 3 enabling others to repeat the methodological process if desired. Analysis of participants' accounts is offered in chapter 4 providing rich detail on their experiences and views of nurses' use of HTPA, how their nursing practice changed and the perceived impact on patients' care. Chapter 5 has offered a discussion of key and new findings that emerged from the data. This chapter acknowledges the new contributions of the findings and addresses the strengths and limitations of this study and considers implications for nursing practice, educationalists, and future research before a final conclusion.

6.1 Contribution to knowledge

The role of the nurse is known to influence nurses' use of history taking and physical assessment skills (HTPA); the fundamental discovery that acute care ward nurses' lack of legitimacy and autonomy to use HTPA prevents them from using the skills in the clinical setting offers newfound insight as to why nurses do not use all HTPA skills taught. Furthermore, novel insights into nurses' lack of support to develop their confidence and competence and organisational barriers of nurses 'firefighting and gap-filling' help to contextualise and advance the knowledge of barriers previously recognised as preventing nurses' use of HTPA skills.

6.2 Strengths and Limitations

This is the first UK qualitative study to explore acute care nurses' use of HTPA in adult acute care settings. A strength of this study was the application of a social constructivist paradigm aligned throughout using a hermeneutical-dialectical methodology, drawing heavily on the hermeneutic circle, and focus groups and interview methods to gather participants' experiences and views on

nurses' use of HTPA. Triangulation was employed to enable multiple viewpoints to emerge from the data, offering new perspectives surrounding the context of nurses' use of HTPA in adult acute care settings. The sharing of these new perspectives could offer others including managers, nurses, and educationalists informative insights into the contextual factors of some of the previously identified issues surrounding nurses' use of HTPA skills.

The inclusion of nurse participants working in varied NP and ward nurse roles in the study was of notable value, as the findings revealed conflicting and consensual perspectives that might not have emerged by only recruiting ward nurses. Furthermore, the experiences and views of NPs and ward nurses enabled a fuller picture concerning acute care nurses' ability to use the skills to emerge. Despite the variation in NPs roles, it was most evident in their accounts of how the use of HTPA skills plays a vital part in the provision of care for acutely ill patients, particularly enhanced holistic care, continuity of care, and rapid interventions. Similarly, recruiting educationalists, as well as managers, provided a greater diversity of perspectives to be shared to gain a better understanding of the complexities surrounding the organizational barriers that emerged from the findings. The advantage of using both focus groups and interviews allowed both breadth and depth of information to be captured to enable a fuller picture to emerge of nurses' use of HTPA in adult acute care settings. Thus, the triangulation techniques employed were a strength of this study.

The choice to use member reflections to aid the credibility of the findings was a strength of this study. Member reflections at the end of the focus groups and interviews meant the timing for participants to reflect was in context and in relation to the situation in which the discussions and interviews took place; this meant that participants could offer further insight which was advantageous and minimised any recall bias before they departed.

The decision to use one hospital location as a pilot site was conducive and enabled a trial run of the recruitment processes so that minor recruitment adjustments could be made to maximise the number of participants who had confirmed attendance. Minor adjustments included liaising with managers to ascertain the time most convenient to run the focus groups and interviews as well as re-positioning posters to highly visible places (in staff only areas). It also enabled the focus group topic guide and interview questions to be reviewed and/or amended if needed, before undertaking the focus groups and interviews at the remaining three study sites.

There are several limitations to take into consideration. Firstly, fewer ward nurses took part in the

study than anticipated which meant a greater diversity of ward nurses' perspectives could not be captured from the ward nurses themselves. Although invaluable insights into the ward nurses' use of HTPA were gained via the NPs, managers, and educators, having stronger voices from the ward nurses themselves would have further strengthened this study. Secondly, in hindsight, a key contributory factor in recruiting fewer ward nurses was most probably due to the recruitment strategy and poster design. Many managers were not aware if any of their nurses had undertaken any HTPA education and hence few ward nurses received information (in envelopes) about the study directly. As a result, the posters displayed in staff only areas became the dominant method of recruitment of ward nurses and unfortunately due to the wording of the poster this might have discouraged or intimidated ward nurses who had learned HTPA but might not be currently using the skills. Similarly, some ward nurses might not have expressed an interest in taking part due to being worried or anxious during focus groups that they were not using the skills despite an expensive course having been funded by their managers.

Participants that took part in this study were all advocates of HTPA skills. This could have increased the potential for participant bias which was minimised where possible e.g. neutrally phrased questions during focus groups and interviews. However, FG discussions can be restricted by dominant or hierarchical group members potentially creating tensions or inhibitions between participants such as nurses and managers, although I decided it was appropriate to use homogeneous focus groups, one for managers and the other for nurses to minimize the risk of any hierarchical influences (Kitzinger, 1994; Goodman and Evans, 2010). In hindsight, with so few ward nurses taking part NPs views might have dominated the focus groups, in that the ward nurses might not have disclosed information that they might have shared with a group of other ward nurses.

Focus groups were highly valuable in generating conversations and discussion amongst participants and enabled a breadth of information to be gathered in short periods of time. However, focus groups did require more organisation to identify the date and time of day, and availability of a suitable room in areas accessible for staff e.g. convenient for them to get to during lunch break. Equally, some ward nurses might have wanted to attend but they have less flexibility when to take their lunch breaks as it depends on the staffing levels on the ward, or the care needs of patients. Therefore, it is possible that some ward nurses might have wanted to attend on the day of a focus group session at their hospital but were not able to due to work commitments on the ward.

My prior clinical experience in acute care and my current role as an educator teaching HTPA enhanced the subjective nature of understanding and interpreting the participants' accounts. My role as an educator meant I had experience and familiarity with facilitating student seminar groups which were conducive to focus group discussions and interviews. Reflexivity throughout has been a key part enabling me to adopt the most apt methodology to gather the data and to assist me to revisit the data to immerse myself more fully to gain deeper insights.

Although due to convenience, because the hospital sites were all local to the study, it meant participants were most likely exposed to the HTPA course that I am involved in delivering. Although my teaching HTPA was a potential bias, this was minimised by the aim of this study not focusing on the delivery of HTPA education. Nonetheless, other HTPA educational courses do vary considerably which may have influenced how nurses use the skills in the clinical setting which might have offered perceived differences and or similarities regarding changes to their nursing care and impact on patient care.

There may be limitations regarding the transferability of the findings to others as this study was local and therefore nurses who have undertaken different HTPA education might not have had the same experiences as the nurses in this study. Equally, managers in other acute care hospitals might have had varied experiences in supporting nurses in their use of HTPA skills. Furthermore, data were collected pre-Brexit and pre-Covid which might also influence the transferability of the findings to other acute care settings in the UK. For instance, Brexit may have had an impact on the staffing crisis in the NHS, or, as a result of Covid, some nurses might be using HTPA differently in the clinical setting or have different organisational factors influencing their use of the skills.

Although a novice researcher, as an educationalist teaching HTPA skills to graduate healthcare professionals, I am passionate about nurses' use of the skills and therefore recognise this as a potential bias. Even though this was mitigated by not focusing this study on the educational aspects of HTPA, some participants might have altered the information shared knowing that I teach the skills. As a novice researcher, a longer period of time between the pilot focus groups and developing the interview questions might have improved or allowed alternative questions to be included in the interview guide; an experienced researcher might have found this process easier and deliberated less about the exact wording of the questions and the specific areas to focus questions on, in order to gain more depth of information. Likewise, with more experience, I would have designed the poster differently and not used a picture or emphasised the 'use of HTPA' as this might have inhibited some ward nurses from expressing an interest in taking part.

For instance, perhaps I could have placed more emphasis on the wording to include if you currently do not use HTPA skills as well as using HTPA skills to convey that a balanced view was being sought of nurses' use, or not, of HTPA skills.

However, my confidence as a novice researcher has grown throughout this process. I am well placed as an educationalist teaching HTPA and a registrant nurse with prior experience working in adult acute care to have combined my expertise in both these areas in the meaning-making processes of data collected from participants' aligning within a social constructivist paradigm. Constant awareness of my position, thinking reflexively throughout, and in-depth discussions during supervisory sessions to challenge my critical thinking were continuous processes throughout this study, thus aiding its credibility.

6.3 Implications

The implications for practice, educationalists, and future research based on the findings of this study are detailed in this section.

6.3.1 Implications for practice

Acute care nurses faced many barriers in using HTPA skills which are pivotal for organisations and the nursing regulator to recognise so that structures can be put in place to support nurses in their development and use of HTPA in clinical practice. The NMC (2018) made clear that all nurses regulated by them must take responsibility and accountability for their actions within the limits of their competence. Providing that all ward nurses have attained in-house clinical competencies and only use HTAP skills to "accurately identify, observe and assess signs of normal or worsening physical and mental health" (NMC, 2018:15), they are essentially working within the limits of their competency. The legitimacy for the ward nurses to use HTPA skills by the NMC in this context would not only facilitate nurses' use of the skills but potentially advance the use of HTPA within the nursing profession. Currently, the lack of legitimacy is seen as a significant factor severely impeding or preventing ward nurses from using the skills.

The continual and growing concerns surrounding acute care nurses' involvement in the recognition and response to the clinical deterioration of acutely ill patients is an ongoing matter. Ward nurses are ideally placed to detect signs of clinical deterioration, as they maintain a constant presence during the shift and get to know their patients. The perceived benefits of ward nurses being able to use HTPA skills could enable them to provide care holistically and aid the

continuity of care throughout patients' hospital admission. It would be of immense value for managers and educationalists working in acute care hospitals to seek support from their directors of nursing and to review acute care ward nurses' job descriptions to legitimise the use of HTPA which was an original finding to emerge in this study. Job descriptions should be explicitly aimed at using HTPA to enhance ward nurses' assessment to recognise findings are abnormal so that they could make credible referrals in the escalation and reporting of their concerns surrounding signs of patients' clinical deterioration.

Managers' support is instrumental in promoting acute care nurses' use of HTPA and in changing the culture in which nurses work. Managers who lack awareness of HTPA skills might find it conducive to liaise with their educational nursing teams to gain a better understanding of what the skills entail. This will enable them to provide appropriate support to develop acute care nurses' use of the skills in the clinical setting. Managers and ward nurses should set clear expectations that HTPA should be used to augment patients' assessment to gather more subjective and objective data when concerned about their clinical conditions. The investment in these skills needs to be strategically incorporated into the organisation's vision of how HTPA PQ education will be translated into practice, its purpose and meaning for practice and the practitioner, and how then the practitioners will be supported after qualification to enable this vision to become a reality.

Managers and educational leads could determine which acute care nurses have already undertaken HTPA education and are not currently using the skills. As mentioned earlier in chapter 5, it would be more practical and feasible to identify those ward nurses who have prior knowledge of HTPA education and support their development of the skills. Having prior knowledge of the skills means nurses can access relevant textbooks and start to relearn the theory of the skills independently. This should run concurrently with supervised mentor support in the clinical setting, as well as offering a refresher course.

Managers and educational teams could encourage acute care nurses to use the A-E framework to structure their patients' assessments by integrating HTPA alongside vital signs. Although A-E is used in more time-critical and life-threatening situations, nurses working in acute care should already have familiarity with using this structured approach. Furthermore, the additional advantage of using this approach is that nurses could incorporate key skills from across all six major body systems which might help nurses to retain the use of most taught skills (respiratory, cardiac, abdominal, musculoskeletal, cranial, and spinal nerves). Ideally, over time nurses could

implement this approach more routinely as it can also enable nurses to be alert for potential as well as actual patient problems.

Educationalists working in clinical settings might want to consider the possibility of offering refresher sessions for nurses that have previously undertaken HTPA education/training who might no longer be using all/any HTPA skills. This would necessitate planning and organization and suitable times would need to be explored to ensure nurses working varied shifts are not excluded from attending such training opportunities. In principle, such opportunities for nurses, especially ward nurses, could help to maintain their use of the skills. NPs could be drawn upon to help deliver refresher courses as this would enable them to share their expertise in the skills. Nurses and managers should agree before nurses attend any sessions to ensure clinical areas are not compromised by staffing issues, equally, managers, where possible should try to provide nurses greater protection to attend such educational training e.g. maybe during periods where two nursing shifts overlap.

Educationalists would benefit from compiling a database of nurses that would be appropriate to act as mentors to ward nurses. Clinical areas or nursing teams e.g. NPs where HTPA skills might be well established could provide support and mentor ward nurses as well as trainee NPs who might not be allocated mentors in practice like trainee ANPs. Clinical educators should coordinate mentor support by liaising with managers to allocate a few mentors to one ward nurse, so there are greater opportunities for a mentor to be available at some point during most shifts to supervise a ward nurse. Equally, mentors could be allocated to supervise a few ward nurses; however, educators must be mindful that mentors can feel tired and fatigued when supervising too many nurses, and therefore it would be vital that mentors are not overburdened. Hence it is fundamental that all NPs could be involved in some supervision of ward nurses as this could ease the workload more evenly for mentors. This would enable the upskilling of acute care nurses, particularly ward nurses. Upskilling the workforce is an aim of the NHS to create greater diversity of skill mix across healthcare teams. Managers would need to coordinate nurses' shifts to coincide with mentors, ideally maximising opportunities to assess patients in the ward setting so that patients also become familiar with more nurses using the skills. Supporting ward nurses to assess acute care ward patients would result in less impact on reducing the ward staffing numbers whilst supervising their practice of the skills. Ultimately, once ward nurses have developed their confidence and attained their clinical competencies, they could then offer ward nursing colleagues support and importantly act as positive role models for other ward nurses and student nurses.

In-house clinical competencies must be realistic and attainable; educationalists should consider developing different clinical competencies specifically relevant to the ward nurses. Attention should be given to the amount and duration of clinical competencies for the ward nurses to maintain their motivation to successfully attain the competencies. Furthermore, ward nurses only need to use HTPA to assess patients to recognise and/or identify abnormal findings to escalate concerns. Given the importance of effective communication skills that are part of history taking skills clinical competencies should incorporate key communication skills into their clinical competencies, as well as nurses being able to verbally report or document findings. Whilst documentation is so variably across and within hospitals' acute care services, documentation should be aimed more specifically at the clinical setting in which nurses work. It would not need ward nurses to undertake a complete history, but they could demonstrate key communication skills, possibly around OLDCART, to enable nurses to explore potential and actual patient problems. Documenting findings should be flexible to allow for variations within the hospital's acute care settings.

Managers might want to consider their leadership and management style as this could play a vital part in increasing ward nurses' degree of autonomy and possibly facilitate ward nurses' use of HTPA skills in acute care settings. As previously mentioned, managers could identify their current management style and seek support from their educational teams on ways to develop more transformational leadership styles which have been shown to create more positive work environments for nurses, by allowing them a greater degree of autonomy in their ability to prioritise their patients' care which is a new finding. For instance, managers could encourage ward nurses to prioritise the use of HTPA to enhance their basic physical assessment when concerned about patients' clinical conditions. Offering support and encouragement could make nurses feel they have greater control over managing their workload. In turn, more autonomy can lead to increased job satisfaction and ward nurses may feel they are able to give quality care to patients in the way that they would like, all of which could aid in the retention of current nursing staff.

Since the NMC stipulated the introduction of certain HTPA skills in the undergraduate curriculum, without the opportunity to practice and develop these skills in the clinical setting, there is possibly little value in teaching HTPA to student nurses as they are likely to perceive the skills as not a nursing responsibility. This is especially since the global evidence strongly points to the fact that few, if any, skills are used in the clinical setting by many nurses, despite being taught them. Whilst

there was some indication that awareness and some knowledge of HTPA skills have potential value for student nurses, unless the ward nurse role has the legitimacy to use HTPA skills, the NMC should seriously contemplate the purpose of certain HTPA skills, such as bowel auscultation being delivered in the undergraduate nursing curriculum. However, if ward nurses used HTPA skills it could potentially facilitate student nurses' opportunities to use the skills and advocate positive nursing role models across hospitals' acute care services. Importantly, because ward nurses and NP would use HTPA skills differently it would enable student nurses to be aware of the benefits of in-depth patient physical assessments and the significance of learning taught skills, particularly in acute care areas where patients are at risk of clinical deterioration.

Ward nurses should be encouraged and offered opportunities to attend and be involved in the wider decision-making processes within the organisations in which they work. This could raise ward nurses' profile of using HTPA and how ward nurses can integrate the skills into their nursing practice and the perceived impact on patient care, importantly allowing nurses' perspectives and greater autonomy alongside others e.g. managers, and doctors in contributing toward better patient care.

It is worth managers considering mentor support concurrently with nurses' HTPA education, which might facilitate nurses' ability to integrate taught skills more easily in the clinical setting. This would provide nurses with opportunities to consolidate their practice of the skills much sooner after being taught the skills in the classroom setting. This could increase nurses' feelings of confidence and competence, encouraging and motivating nurses to practice the skills even more which are all fundamental to promoting the successful transfer of learning HTPA into the clinical setting.

6.3.2 **Implications for educationalists**

Educationalists teaching HTPA would benefit from considering incorporating some areas concerning how nurses might accurately document findings to aid nurses' feelings of confidence and competence in developing the use of the skills in the clinical setting. This is essential for acute care nurses that might not have as much clinical support to develop this skill; otherwise, there is the real danger that nurses might be less likely to use the skills in the clinical setting as they are not able to record their findings when assessing patients. Information could focus on accurately describing the findings e.g. knowing that normal breath sounds imply vesicular. Getting nurses to practice verbalising their findings following the practice of a patient examination or practice

documenting their findings in a concise manner with a focus on describing what they see, feel and hear, could help nurses to develop greater familiarity with using the terminology.

Educationalists in all HEI and clinical settings, including mentors, should encourage nurses to use the confidence-competence matrix to enable nurses to use it as a tool to identify the development stage of their feelings of confidence-competence. This is pivotal as the lack of confidence and/or competence is a key limitation hampering nurses from using the skills. Central to supporting nurses, educationalists should reiterate to nurses that it is perfectly normal for their feelings of confidence-competence to fluctuate, ensuring that in such situations nurses are encouraged to access relevant clinical colleagues to seek further support.

Educationalists teaching HTPA could consider raising awareness of different approaches to integrate HTPA skills as part of their nursing practice. Traditionally, a top-to-toe or body systems approach is often used to teach and break down the skills to aid nurses learning, but often reassembly of the skills to become more fully integrated is perhaps something that currently is not offered. Awareness of the benefit of an A-E framework for ward nurses working in acute care, or other similar settings e.g. community care, where there is a risk of clinical deterioration could offer nurses a familiar and alternative approach in the clinical setting. Even though the A-E framework is often used in time-critical situations, it could provide a universal framework for nurses working in acute care, and over time could form part of nurses' routine structured assessment to assess acute care patients' care needs ' holistically', incorporating key elements across the six major body systems into its framework.

6.3.3 Implications for future research

More qualitative research exploring ward nurses' use of HTPA would be highly desirable, particularly a larger sample of ward nurses who have been exposed to lots of different HTPA educational courses which will then offer greater insight into factors that facilitate and restrict their use of HTPA skills. A larger sample of ward nurses will also enable insight into the skills in more diverse clinical settings and capture ward nurse views and experiences which might differ from the participants involved in this study. Additionally, the focus of further studies could examine factors such as legitimacy, autonomy, and decision-making concerning nurses' use of HTPA skills. Equally, there is real value in exploring further nurses' use of HTPA in detecting signs of clinical deterioration and its impact on patient care.

Given the ongoing and rising concerns surrounding the recruitment, retention, and attrition of nurses it might be useful to conduct further studies focusing on factors that facilitate acute care nurses' use of HTPA skills, especially ward nurses. Given time is precious in the NHS, approaches such as e-Delphi can be used for qualitative and quantitative studies (Fletcher et al., 2014) which would reduce the amount of time an individual is involved in the study. Although e-Delphi is criticised for imposing consensus among participants, it does have the advantage of creating a dialogue between participants (experts), preserving anonymity and possibly minimising the dominant voice that is considered more susceptible in focus groups (Fletcher et al., 2014). Equally, conducting mixed-methodological research might also be of merit to balance out the limitations associated with separate quantitative and qualitative research.

Another area of interest to explore is nurses' decision-making skills in using HTPA skills and what informs their choice of techniques and skills to use in different clinical situations or the decisions made by nurses working in areas of specialism to focus predominantly on skills they perceive most relevant to their clinical setting. Findings of such research could offer insights and ways to encourage nurses to retain the use of skills across all body systems so that in time-critical situations nurses can draw on all taught skills to accurately assess acute care patients.

Further research could explore the use of HTPA by other healthcare professionals (HCPs) as HTPA education is increasingly multi-professional and it would be interesting to explore what factors might influence other HCPs' use of HTPA skills in the clinical setting. This would allow greater insight into the varied ways in which HCPs use HTPA skills e.g. to assess the effects of any intervention or to inform any diagnosis and findings that could have implications for task shifting of HTPA across different professions within the NHS workforce.

It might also be time to explore student nurses' experience surrounding HTPA, especially as the UK nursing undergraduate curriculum has been teaching elements of HTPA for several years now and some of these students will have qualified. This could be useful to inform and shape future nursing curriculum as it is imperative that focus is retained on HTPA skills appropriate for student nurses. For instance, it does not seem practical to teach all HTPA to undergraduate nurses but certain skills focusing on inspection, palpation, and auscultation (bowels and lungs) could be encouraged and potentially integrated more readily into their nursing practice. In this way, HTPA could be introduced in more detail once student nurses have qualified, as this would enable them to develop the experience and building blocks on which to develop future use of HTPA skills.

6.4 Conclusions

Acute care nurses' ability to use HTPA in the clinical setting has the potential to support nurses in the recognition and response to signs of clinical deterioration. Ward nurses need legitimacy and autonomy to use HTPA skills, both organisations and the nursing regulator are instrumental to advance the use of HTPA skills within the nursing profession. Managers' input is vital to ensure acute care nurses have appropriate mentor support to develop their confidence and competence in using the skills in clinical practice. Implementing the A-E structured approach would assist acute care nurses to integrate the skills into their nursing practice, enabling nurses to enhance patients' safety and care experience during their hospital admission.

"For the sick it is important to have the best".
  Florence Nightingale

Appendix A   Summary Table

Author	Country of Origin	Title and Aim(s)	Methodological Aspects		Findings	Limitations	Category
			Design, data collection, analysis	Sample			
Brown MC, Brown JD and Bayer MM (1987)	USA	Continuing nursing practice through continuing education in physical assessment: Perceived barriers to implementation Aim to identify if attending a CPD module increased type and frequency of skills used, identify real barriers and changes to nursing practice	Survey questionnaire listing 47 items. Likert scale. Pilot tested on 20 graduate students who had completed a health appraisal course.	Purposive sample 359 registered nurses invited – response rate 41% (n=147). Participants from medical/surgical/community health and school health areas	Not all skills taught used. Over 60% of nurses reported using skills often in: cardiovascular, history taking, skin and lungs. The survey identified nurses reported; increased confidence to use skills, able to interpretation/report patient findings, initiate nursing care, improved interactions with patient, improved collegial relationships, understand doctors notes. Real barriers seemed fewer than perceived barriers - main barriers identified by nurses was lack of competence. Feeling of increased confidence helped use	Validity and reliability of questionnaire not established – and although pilot group undertaken they might not have been representative of the participants in the main study. Not clear how real versus perceived barriers were measured and/or obtained or compared.	Skills underused. Nursing practice. Influential factors.

Author	Country of Origin	Title and Aim(s)	Methodological Aspects		Findings	Limitations	Category
			Design, data collection, analysis	Sample			
					skill.		
Vines SW and Simons JA (1991)	USA	Evaluating a staff development physical assessment program Aim to assess clinical usage of physical assessment skills	Programme evaluation. Questionnaire based on Colwell and Smiths (1985). Results evaluated as grouped data – frequencies and percentages used for majority of data. Mean and standard deviation for descriptive data. Face validity of questionnaire confirmed by panel of ten nurse experts.	Voluntary participation of 23 registered nurses who had completed a physical assessment course. Mean age 36.6 years 48% were Advanced Diploma Nurses. 26% were Diploma nurses. 17.4% were BSN nurses. 61% had physical assessment education as part of their nursing programme. 13% had physical assessment education when registered. 17.4% had attended no physical assessment educational courses.	Main skills used daily >56% nurses assessment of consciousness, memory, cognition, radial pulse, skin and lung auscultation. Percussion not used by any nurses daily and 21% palpated abdomen daily Few nurses reported barriers = not identified as pt. problem, lack familiarity with skill	Reliability and other methods of validity not established.	Use of skills. Influential factors.
Reaby LL (1991)	Australia	Use of Physical Assessment Skills by Australian Nurses Aim to report of Australian nurses are implementing physical assessment skills into practice	Evaluation Report Pre-post-test listing 36 physical assessment skills. This was completed prior to the 5 day taught course commencing. Post-test completed 3 months after course completed.	Post registered nurses on a 5 day taught course at the University of Canberra. Total number = 22 10 from an adult medical-surgical area 6 from community care 4 from critical care 2 from nursing care home	Education and repeated practice increased number some skills used by nurses - percussion increased significantly following taught course and opportunity for repeated practice. Increased confidence helped nurses use skills. Lack support from nursing colleagues prevented use.	No information about design. No detail of analysis for pre-post test Validity of tool not established. Small purposive sample	Use of skills Influential factors

Author	Country of Origin	Title and Aim(s)	Methodological Aspects		Findings	Limitations	Category
			Design, data collection, analysis	Sample			
Yamauchi (2001)	Japan	Correlation between work experiences and physical assessment in Japan Aim to determine baseline data of nurses' knowledge, use and need of physical assessment skills.	Survey design used self-administered questionnaire developed by 3 nurses' educators and 3 nurses. Used systematic physical assessment model as conceptual framework. Survey used 5 point Likert scale. 28 items listed. Establishing internal consistency not necessarily due to each item on questionnaire independent. Pilot survey 20 nurses established reliability. Wilcoxon matched pairs signed rank test used to determine test-retest reliability	630 bedded hospital - survey distributed to all 357 registered nurses. 349 completed and returned. 343 females and 7 males. Mean age 39.8 yrs. Average yrs in nursing = 16.6 yrs. 39 from Outpatients department 22 from general units 63 from medical units 99 from surgical units 22 obstetrics and gynaecology 24 from ITU 1 from rehabilitation 22 from operation unit 1 from supply unit	Basic physical assessment skills used frequently. Vital signs only used daily by 80.3% Skills underused. Lack of knowledge about skills was most selected deterrent. Nurses with more years' experience had more knowledge of skills	Survey validity limited re nurses' knowledge of skills - knowledge appeared to relate to ability to perform skill or teach others. Unclear how conceptual framework related to the study? if linked to knowledge and need of skills.	Use of skills Influential factors
Coombs MA and Moorse SE(2002)	UK	Physical assessment skills: a developing dimension in clinical practice Aim to demonstrate application of physical assessment skills in the critical care outreach service	Clinical case report by 2 critical care outreach nurses accounts detailing their patient assessment and findings. Both nurses accounts demonstrated interpretations and of their patients' abnormal findings on assessment.	2 patients in acute care who had been referred to critical care outreach service.	Nurses give detail on how they interpreted their physical assessment findings - focus on respiratory and cardiac systems. Demonstrated how physical assessment skills enabled them to prevent patient deterioration and aid patient outcome. Offers insight for into complexity of ward patients.	Subject to bias because clinicians self-selected the cases. Also means findings might not be generalisable to larger population	Nursing Practice

Author	Country of Origin	Title and Aim(s)	Methodological Aspects		Findings	Limitations	Category
			Design, data collection, analysis	Sample			
Secrest JA, et al (2005)	USA	Physical Assessment Skills: A Descriptive Study of What Is Taught and What is Practiced Aim to investigate skills taught in undergraduate curriculum and skills used by practicing nurses.	Exploratory descriptive Study Researcher developed survey questionnaire from standard textbooks listing 120 skills. 3-point response for educators and five-point response for nurses. All data collated then collapsed into 3 categories. Median scores computed on all skills.	Purposive Sample 2 groups: Group 1 -12 educators from seven states who teach skills at UG level. 4 educators Group 2- 51 registered nurses from seven states. 25 from Intensive Care 8 from medical-surgical 12 from paediatrics 6 from home health Mean Age = 37yrs Majority female = 39 Mean months in practice = 130	Skills used in practice fewer compared to skills taught. ICU represents largest group nurses therefore difficult to compare finding between different specialists as by very nature in their different areas will result in different skills being used.	Discussion not always supported by evidence presented. Potential lack of validity of tool. Sample size small, non-random and majority participants from ICU. Wording for responses may have lacked clarity. Acknowledged by researcher that number of skills listed in survey tool likely to exceed number skills used in practice.	Use of skills
Giddens JF (2007)	USA	A Survey of Physical Assessment Techniques Performed by RNs: Lessons for Nursing Education	Descriptive study involving use of survey of 126 items of physical examination techniques. Survey used 6-point scale and was developed using key examination textbooks= Jarvis (2003) and Wilson and Giddens (2000). Content experts used to validate all pertinent domains of knowledge	250 registered nurses involved in direct care of inpatients or outpatients. 199 surveys returned. 6 were identified as unable to be analysed. Nurse all employed for minimum 20 hours per week employed by large university-based health care faculty in United States	Type skills used varied in different areas of specialism. Few skills used compared to number skills taught. Use/development skills used linked to personal characteristics. Use of skills appeared to be influenced by	No rationale for 6 respondents not used. Incentive of gift certificate given on completion of survey. Author acknowledged some skills less likely to be used by nurses and	Use of skills Influential factors

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Author	Country of Origin	Title and Aim(s)	Methodological Aspects		Findings	Limitations	Category
			Design, data collection, analysis	Sample			
			included on the survey. Rationale provided for analysis and information detailed on scoring system.		role, individuals perception re-need for skills Use influence by own perception of nursing.	reliability of tool not established.	
McElhinney (2010)	UK	Factors which influence nurse practitioners ability to carry our physical examination skills in the clinical area after a degree level module - an electronic Delphi study Aim to investigate nurse practitioners perceived factors that helped or hinder their ability to use physical assessment in clinical practice	Delphi study used blind copy email over 6 weeks - sought to gain consensus. 5-point Likert scale Content analysis	Purposive sample 21 nurses from 10 clinical area on practitioner pathway - participants had completed degree level physical assessment education module. 18 females and 3 males. Yrs since module completed=1-4.6yrs Clinical setting 4 surgical receiving, 1 medical receiving, 1 surgical, 1 medicine, 3 A&E, 3 cardiology 4 Hospital at night, 1 vascular access, 1 outpatient, 2 critical care outreach	Identified 22 helping factors and 13 hindering - across 4 themes=individual, organisational, educational and support of others Help=Role makes difference to patient care, Increased confidence in own ability use skills, self-motivated to continue practice, trust colleagues in your ability, autonomy to practice Hindering individual =Confidence in own ability to practice certain systems (Heart 81%, abdo 76, Resp 61, MSK 42), Anxiety regarding increased responsibility, fear of making a mistake,	Round one less detailed. Small sample size affected generalisation	Nursing Practice Influential factors
Edmunds L et al (2010)	UK	The use of Advanced Physical Assessment	Qualitative Longitudinal descriptive study. 3 methods data collection. Interview using semi	Convenience sampling applied to four student cohorts (registered students) who had undertaken their clinical	Predominantly used cardiac, respiratory and some abdominal skills - few skills used	No rationale re-time intervals of data collection; 6 and 9 month	Use of skills Influential factors

Author	Country of Origin	Title and Aim(s)	Methodological Aspects		Findings	Limitations	Category
			Design, data collection, analysis	Sample			
		Skills by Cardiac Nurses	structured approach. Self-reporting activity log (to capture 10 working days) Non-participatory observation within participants clinical setting. Qualitative data analysed using Newell and Burnards.	patient assessment module	compared skills taught. Nurses who practice skill frequently increased confidence and felt skills beneficial for all nurses. Some viewed skills as not part of their role and lacked confidence to practice when observed.	intervals may have been insufficient time difference to show difference in results. Self-reporting – can be biased.	
Aldridge-Bent (2011)	United Kingdom	Advanced physical assessment skills: implementation of a module Aim to explore benefits for District nurses undertaking physical assessment module	Qualitative exploratory design. Pilot - Focus group DN students to identify themes to assist development of individual interview guide. DN students interviewed before taught physical assessment module and 3 months after module. Thematic Analysis of interview data (Colaizzi)	Pilot - purposive focus group of 10 DN students (all had between 1-5yrs experience working in community settings as staff nurses). 3 DN students randomly selected (randomisation not detailed)	Confusion regarding what physical assessment is. Concerns how DN might integrate physical assessment in their nursing practice. Nurses anxious to use some skills	Total number DN students not stated, and randomisation not detailed. Only focused on using skills for patients with long term conditions (LTC)	Use of skills Nursing practice
Oh H, Lee J and Kin EK (2012)	Korea	Perceived Competency, Frequency, Training needs in physical assessment among registered nurses.	Cross-sectional survey using 30-item (shortened version Giddens tool). Three instruments; perceived competency, frequency scale, training needs scale developed by study researcher. Content validity index of 3	Participants recruited from 2 hospitals (University and General) in different cities. Convenience sample 104 nurses Clinical experience 1-5yrs = 64 nurses. ≥5yrs=40 nurses	Nurses top 3 training needs auscultation skills. Heart and lung auscultation identified as least used and perceived least competent. Author has noted that culture might influence	No detail given about experts. Participants perceived competency level, and scales (frequency/trainin g). Although	Use of skills

Author	Country of Origin	Title and Aim(s)	Methodological Aspects		Findings	Limitations	Category
			Design, data collection, analysis	Sample			
		Aim: to investigate perceived competency, frequency of skills used and unlet training needs.	instruments evaluated by experts. Reliability of the instruments was examined using internal consistency and test-retest reliability. Cronbach's alpha coefficient was analysed using SPSS reliability analysis for each scale and test-retest reliability		auscultation as this is considered role of doctor. Nurses with 5yrs or less clinical experience wanted more training and those 5yrs or more used some skills more frequently – but mainly basic skills. Many skills basic and involving inspection.	competency level perceived numeric scale used e.g. 1=not at all competent, 4=competent	
Birks M et al (2013)	Australia	The use of physical assessment skills by registered nurses in Australia: Issues for nursing education.	Survey Phase 2 of a larger study – modified Giddens (2007) survey tool used. 121 skills listed using a 6-point Likert scale with one section to add a qualitative comment. Summary statistics used to describe demographic variables. Spearman's rank correlation to determine association between variable applied via software.	Pre-test of tool by 6 university nursing lecturers. 1518 surveys returned. 1220 complete and analysed. All registered nurses with various nursing roles: Registered nurses (43%) Clinical specialist/educator/consultant (26.7%) Nurse manager/administrator (14%) Midwife (5.7%) Community nurse (4%) Mental health nurse (2.6%) Researcher/teacher (1.8%)	Skills used every time the nurse worked: Inspect skin, evaluate breathing, assess mental status/consciousness, GCS, evaluate speech, CRT, inspect for oedema (extremities), inspect abdomen, palpate temperature of extremities.	No detail regarding pre-tests panel expertise of these skills specified. Recognised there may be practice setting variations in use of skills not taken into account in this study. Unable to determine response rate as initial sample population unknown by researchers. Arguably difficult to make comparisons regarding use of skills as some nurses roles less	Use of skills - Nursing practice Influential factors

Author	Country of Origin	Title and Aim(s)	Methodological Aspects		Findings	Limitations	Category
			Design, data collection, analysis	Sample			
						clinically focused. Also, less likely that mental health nurses use skills more compared to midwives. Basic assessment skills being predominantly used. These would not be considered more advanced assessment skills.	
Anderson et al (2014)	USA	An evidence-based approach to undergraduate physical assessment practicum course development	Giddens 126 skills questionnaire survey. Likert scale 0-5 but categories clustered	72 RN Years qualified range from not reported to 45 years. Range of setting acute/critical care and community	37 competencies essential. 18 supplemental and 71 non-essential Most skills essential basic assessment skills EPAS essential included abdominal inspections, palpation and auscultation	Giddens questionnaire deemed impractical and no longer reflect current nursing practice.	Use of skills
Osborne et al (2015)	Australia	The primacy of vital signs – Acute care nurses and midwives use of physical assessment skills a cross sectional study	Cross sectional survey -single centre 133 skills questionnaire modified 126 skills by Giddens. Median frequency calculated. Mean and regressions coefficients	434 nurses and midwives from 929 bedded tertiary hospital	Core skills used mainly basic assessment skills. Concerned over few EPAS use to detect clinical deterioration. Reliance on technology largest barrier. Interruptions/no time, lack confidence, lack role module, lack influence patient care	Self-report reliant At time of survey hospital undergoing radical changes and adjustments that may have altered participants perceptions	Use of skills Influential factors

Author	Country of Origin	Title and Aim(s)	Methodological Aspects		Findings	Limitations	Category
			Design, data collection, analysis	Sample			
Douglas et al (2015)	Australia	Too much knowledge for a burse? Use of physical assessment by final semester nursing students Examine patterns and correlations of PAS to UG about their knowledge, use and perceived barriers	Cross sectional Survey 126 item questionnaire (based Giddens). Likert scale 0-5 and open-ended comment boxes. Median frequency to calculate.	239 Students on final placement of undergraduate programme. Convenience sample. Critical care/ surgery/medicine. Emergency, perioperative	70% skills not used. Few skills used daily basic assessment skills. EPAS rarely used = auscultation lungs, heart and bowel. Need to make skills relevant and seen as important -currently seen by nursing profession as insignificant. Feels value of skills could aid critical thinking but skills eroding due to MEWS (linked patient safety government driver)	Focus on barriers	Use of skills Nursing Practice Influential factors
Cicolini G, et al (2015)	Italy	Physical assessment techniques performed by Italian registered nurses: a quantitative survey. Aim to describe core techniques of physical assessment performed regularly	Cross sections survey - used shortened version Giddens tool. 30-item questionnaire using 6 points Likert scale. Survey piloted by 20 RNs. Survey was posted online for participants to complete. Questionnaire reliability= Cronbach alpha values. ANOVA used to evaluate potential differences across groups (type education/occupation sector/clinical setting/years employed/age)	1182 participants in 92 Italian provinces across 17 Italian regions completed survey. Participants worked in public and private facilities full time. 73.8% lived in Northern Italy 16% in centre and 10.1% southern islands. Clinical setting - internal medicine 31.2%, ICU 21.2%, Surgical 16.5% and community 15%	Not all skills taught used- 20 routinely used, 6 seldom used and 4 almost never performed (auscultation lung/heart/bowel sounds and spine inspection). Many skills basis skills Nurses in ITU and nursing homes more significant than others to perform skills.	Survey design did not enable causal relationships to be determined. No response rate provided. Participants self-report	Use of skills
de Oliveira et al (2016)	Brazil	Perceptions of students on	Qualitative study using hermeneutical-dialectic	12 student nurses in private hospital	Holistic care see patient as a whole.	Do not make explicit	Nursing practice

Author	Country of Origin	Title and Aim(s)	Methodological Aspects		Findings	Limitations	Category
			Design, data collection, analysis	Sample			
		the physical exams in clinical nursing practice	perspective. Thematic analysis approach not detailed. Interviews.		Lack role model. Difficulty auscultation Physical assessment skills encouraged nurses to touch patients – better relationship and caring	methodology - Not clear which year of training students were in	
Allan H and Raleigh M (2016)	UK	A qualitative study of advanced nurse practitioners' use of physical assessment skills in the community: shifting skills across professional boundaries. Aim to explore multiple perspectives on use of physical assessments skills by advanced nurse practitioners.	A qualitative interpretative single embedded case study (Yin). Case boundary = community. Unit of analysis = physical assessment skills. Subunits of analysis = ANP 3 FG and 8 semi structured interviews Framework method suitable analyse interview data within cases.	22 participants with 10-25 yrs experience working in community. Participants included if physical assessment education taken at university and over 2 yrs post registration. Participants had to have direct/indirect involvement with physical assessment skills in community. Participants = nurse practitioners, GP and managers.	Nurses used physical assessment skills to maintain patient safety/person centred care - enhanced nurse-patient relationship. Added value of nurses using skills Barriers- lack protected time to learn skill and unsupportive learning cultures, lack of opportunities to practice to develop competence. Deficits in knowledge seemed to influence development of confidence. Heavy workloads and complexity of patient illness prevented working proactively.	No detail given as to participants heterogeneity/homogeneity participants in FG.No detail re participants interviewed. Patient perspectives identified as limitation by authors.	Nursing Practice Influential factors
Maejima S and Ohta R (2018)	Japan	Physical assessment by Japanese	Cross-sectional survey of Japanese nurses' results compared with Cicolini et als.	167 out of 171 returned (97.6%). Public health nurses, midwives, RNs and semi-RNs.	Japanese nurses more likely to use chest auscultation rather	Participants self-report. Results limited to	Use of skills

Author	Country of Origin	Title and Aim(s)	Methodological Aspects		Findings	Limitations	Category
			Design, data collection, analysis	Sample			
		community hospital nurses compared to that performed oversees: A cross-sectional study.	(2015) results. Used shortened version Giddens tool - 30 item questionnaire using 6 point Likert scale. Chi-square test for comparisons with Cicolini et al's study.	All worked in one hospital across acute care, comprehensive care, rehabilitation, chronic care, operating theatre, dialysis centre, visiting nursing station, health maintenance centre.	than inspection of chest which was found in Italian nurses – possible culture factors at play here. Although authors noted auscultation is common practice and not seen as an advanced skill. Many skills basic No statistical difference in performance based on number of years clinical experience.	one hospital. Nurses worked in broad range specialities.	
Mitoma R and Yamauchi T (2018)	Japan	Effect of a physical assessment educational program on clinical practice. Aim to investigate effect of educational program on EPAS for nurses respiratory and cardiac systems.	Survey pre-post-test (2 months after training) Wilcoxon signed rank test to compare frequency of use between hospital and home visit nurses. Pilot to test tool Questionnaire 24 items 12 respiratory 12 cardiac – also questionnaire for barriers and facilitating factors (7 items listed) Likert scales 1 – 5.	104 RN responded to pre-post questionnaires. 204 responded to pre-test only.	Significant difference between hospital and home-visit nurses. HV nurses used 2 respiratory skills and 5 cardiac skills more than hospital nurses – thought this was due to nurses needing wider repertoire of skills. Nurses consistently used auscultation skills before and after training. Some skills never used even after training. After training fewer nurses reported nurses do not need to	Participant bias – as nurses more interested in EPAS so less likely to be representative of nurses as a whole.	Use of skills

Author	Country of Origin	Title and Aim(s)	Methodological Aspects		Findings	Limitations	Category
			Design, data collection, analysis	Sample			
					perform this skill. Training improved knowledge of all taught skills so post training barriers noted as lack of confidence and insufficient time. After training factor enhanced use was 'think nurses may perform skills.		
Shi Q, He, GF, Zhang LL, Morrow MR and Zhao Y (2019)	China	Barriers to physical assessment: Registered Nurses in Mainland China	Multi-centre, cross sectional Survey design 171 items listed across 10 assessment categories e.g. skin, lymph, head & neck, breast & lungs, heart and blood vessels, abdomen, spine&extremeties, nervous system, genitalia & rectum. Survey designed by research staff using nursing textbooks and published articles. Likert scale 1=don't know how to do skill, 2=perform rarely, 3=perform occasionally, 4= perform frequently, 5=regularly every time at work. Descriptive stats, percentages, frequency, mean, standard deviation. ANOVA for demographic details. SPSS version 16.0. Virginia Henderson framework underpinned	1115 participants (convenience) across 6 geographical regions. Nurses' clinical area: 401 medicine, 401 surgery, 95 ITU/ED, 202 Gynaecology/obstetrics, 16nursing admin. AssociateND=610, BachelorSN=483, MastersN=22 1-5yrs experience=667, 6-10=203, 11-20=203, ≥21=43	Inspection 94% percussion 58% Palpation 57% Auscultation 56% 15% skills used regularly. 17% used frequently, 22% used occasionally, 25% never used. Perceived barriers reported lack of training, 79.8% lack of uniform physical documentation form, 60.8% lack of time, lack of support/encourageme nt. Nurses higher educated used skills more. Authors noted fewer nurses compared to other countries = ratio of doctors to nurse in	No detail about researchers experiences of skills- 171 item seems very similar to Giddens first survey design in terms of assessment categories – so many skills less likely to be used e.g. external genital organs. Not clear how framework underpinned study design/methodolo gy.	Use of skill Influential factors

Author	Country of Origin	Title and Aim(s)	Methodological Aspects		Findings	Limitations	Category
			Design, data collection, analysis	Sample			
			study		China 1:0.7 compared to USA 1:3.6 and Japan 1:4.5 as key factor impacting on lack of time		
Kutah OA (2021)	Jordan	Physical assessment techniques performed by Jordanian registered nurses (RNs): Survey Study. Aim: to determine range skills used to inform undergraduate curriculum. To decide how confidence nurses are about using EPAS.	Survey design 30 item listed using Giddens 2007 survey. Likert scale 1=not relevant, 2=somewhat relevant, 3=quite relevant, 4-very relevant. Validity checked group experts (lecturers/clinical) to test due to cultural differences. Content validity index of questionnaire evaluated by experts. Reliability instrument using internal consistency and test-retest reliability. Cronbach's alpha coefficient SPSS pilot 20 subjects.	RNs across 4 hospitals (public and private). Convenience sampling. Stratified simple random sampling 138 out of 150 (90%) return rate RN participant. Mangers, educators, ANP/NP/CNS excluded. 30paediatric, 27%medicine, 22% maternal-infant, 21%surgical. 63%10yrs or less experience. 31%more than 10yrs	Most skills basic but used regular or frequent basis. Nurses working public sector appeared use skills more than those in private sector – thought that less educational training opportunities in private sector and possibly nurses have less autonomy. Nurses with 10yrs less experience using more than those 10yrs or more – this is thought to be due to the introduction of critical thinking, decision-making and competency based learning in nursing curriculum during last 10 yrs. Area of speciality did not influence type of skills – this might be because many skills basic meaning expect	Findings do not aid understanding of context e.g. learning skills. Convenience sampling noted to limit generalisability	Use of skills

Author	Country of Origin	Title and Aim(s)	Methodological Aspects		Findings	Limitations	Category
			Design, data collection, analysis	Sample			
					nurses to use these.		

Appendix A

Appendix B   IRAS Ethical Approval

Ymchwil Iechyd
a Gofal Cymru
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Faculty of Health Sciences
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SO17 1 BJ

Email: hra.approval@nhs.net
Research-permissions@wales.nhs.uk

21 May 2018

Dear Miss Diggens

HRA and Health and Care Research Wales (HCRW) Approval Letter

Study title:	**A Qualitative Collective Case Study of Nurses' Use of History Taking and Physical Assessment in Adult Acute Care Settings.**
IRAS project ID:	**227146**
Sponsor	**University of Southampton**

I am pleased to confirm that HRA and Health and Care Research Wales (HCRW) Approval has been given for the above referenced study, on the basis described in the application form, protocol, supporting documentation and any clarifications received. You should not expect to receive anything further relating to this application.

How should I continue to work with participating NHS organisations in England and Wales?
You should now provide a copy of this letter to all participating NHS organisations in England and Wales*, as well as any documentation that has been updated as a result of the assessment.

*'In flight studies' which have already started an SSI (Site Specific Information) application for NHS organisations in Wales will continue to use this route. Until 10 June 2018, applications on either documentation will be accepted in Wales, but after this date all local information packs should be shared with NHS organisations in Wales using the Statement of Activities/Schedule of Events for non-commercial studies and template agreement/ Industry costing template for commercial studies.

Following the arranging of capacity and capability, participating NHS organisations should formally confirm their capacity and capability to undertake the study. How this will be confirmed is detailed in the "*summary of assessment*" section towards the end of this letter.

You should provide, if you have not already done so, detailed instructions to each organisation as to how you will notify them that research activities may commence at site following their confirmation of capacity and capability (e.g. provision by you of a 'green light' email, formal notification following a site

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UNIVERSITY OF Southampton

Faculty of Health Sciences Level 3, Room 3005 University of SouthamptonHighfield SouthamptonSO17 1BJ

Tel 02380 597899

Study Title: A Qualitative Collective Case Study of Nurses' Use of History Taking and PhysicalAssessment in Adult Acute Care Settings.

Dear

I am writing to you because as a manager of an adult acute care area, you may have nurses in your clinical setting who have had some type of training/education in using History Taking and Physical Assessment skills. Therefore I would like to invite you to take part in a focus group discussion to talk to others and share your views and experiences of nurses' use of History Taking and Physical Assessment skills. This information will form part of my PhD studies exploring nurses'use of these skills in adult acute care settings.

Before you decide whether or not you would like to take part, I have enclosed a Participant Information Sheet and consent form which contains more information about this study and whatyour involvement would be. Please take time to read the enclosed participant information sheet and take time to think about whether or not you would like to take part.

If you have any questions about the study then please do contact me, Pamela Diggens by email atpd3@soton.ac.uk or telephone 02380 597889 so I can discuss these with you.

Thank you for taking the

time to read this letter.

Yours sincerely,

Pamela Diggens

UNIVERSITY OF Southampton

Acute Care Manager Participant Information Sheet

Study Title: A Qualitative Collective Case Study of Nurses' Use of History Taking and Physical Assessment in Adult Acute Care Settings.

Researcher: Pam Diggens   **ERGO number:** 31188

Supervisors: Dr Helen Rushforth and Dr Kathleen Kendall   **IRAS ID:** 227146

You are being invited to take part in this research study. Before deciding if you would like to take part it is important you understand why the research is being done and what your participation would involve. Please read the following information carefully and discuss it with other people if you wish. If you are happy to participate you will be asked to sign a consent form.

What is the purpose of the study?

Evidence supports that when nurses receive appropriate training they can perform History Taking and Physical Assessment skills as well as doctors. However less is known about what factors influence nurses' use of these skills, changes to nursing practice and impact on patient care, particularly in adult acute care settings. These are areas that this study aims to explore aspart of my PhD thesis on nurses' use of History taking and physical assessment in adult acute care settings.

Why have I been invited to participate?

It is believed you are the manager of an adult acute care area and nurses in your area have undertaken some type of History Taking and Physical Assessment course/training. Therefore your views and experiences of nurses' use of History Taking and Physical Assessment are valuable contributions that will provide insight into nurses' use of these skills.

What will happen to me if I take part?

If you decide to take part please contact me so I can discuss the study in full and answer any questions you might have. You will be invited to attend one focus group session (approx. 1 hour),in your own time, to talk with others about nurses' use of History Taking and Physical Assessment skills and share you views and experiences. This will be the maximum amount of time you will be involved in the study. The focus group will be audio recorded to ensure I captureaccurately what is shared.

You will be asked to sign a consent form prior to the focus group commencing and you will be able to keep a copy of this along with this information sheet for your own records. The focus group will be in a convenient location and refreshments will be provided.

Are there any benefits in my taking part?

There may be no direct benefits to you, but you might be interested in talking with peers about your views and experiences of nurses' use of these skills in acute care. It is anticipated that the findings from this study will contribute towards the knowledge of existing literature about nurses' use of these skills.

Are there any risks involved?

It is highly unlikely but in the event that you disclose something which may cause harm to othersI may need to discuss this further with you, and if necessary, talk to my supervisors about the best course of action.

Will my participation be confidential?

It is possible that you may know other participants at the focus group and due to the nature of focus groups it is not possible to guarantee absolute anonymity. However, I will ask everyone to please not talk about what was shared during the group's discussion. First names will be used during the focus groups discussion but I will remove your name afterwards. To maintain confidentiality all documentation will use a pseudonym. I will share information where necessary with my supervisors to achieve my study but I will not reveal your identify so your anonymity will be maintained. Personally identifiable data will be stored securely in a locked cupboard or on a password protected computer at the University. It will be stored for 10 years then destroyed securely.

What happens if I change my mind?

You may withdraw from the study at any time without having to give any reason. I will not inform anyone of your decision and it will not affect your relationship with the University or your employment. Once a focus group session has completed it will not be possible to extract any information you have given.

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What happens if something goes wrong?

In the unlikely case of concern or complaint, please contact the Research Governance Manager who can be contacted by email rgoinfo@soton.ac.uk or 02380 595058

Where can I get more information?

If you are interested in taking part or would like more information about the study, please contact me, Pamela Diggens by email at pd3@soton.ac.uk or telephone 02380 597889. If you chose to contact me by telephone and I am not available to speak with you, please do leave a message so I can get back in touch with you to arrange a convenient time to answer any questions you might have.

Thank you.

Thank you for taking the time to read this information sheet and considering taking part in the study.

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Acute Care Manager Focus Group Participant Consent Form

Study title: A Qualitative Collective Case Study of Nurses' Use of History Taking and Physical Assessment in Adult Acute Care Settings.

Researcher: Pamela Diggens

Supervisors: Dr Helen Rushforth and Dr Kathleen Kendall

ERGO number: 31188

IRAS ID: 227146

Please initial the box(es) if you agree with the statement(s):

I have read and understood the information sheet and have had the opportunity to ask questions about the study.	
I agree to take part in this research study and agree for my data to be used for the purpose of this study. I understand on completion of the focus group it will not be possible to have my data extracted.	
I understand my participation is voluntary and I may withdraw at any time without it affecting my rights or relationship with the University.	
I will maintain confidentiality of what was talked about in the focus group.	
I am happy to be contacted regarding other unspecified research projects. I therefore consent to the University retaining my personal details on a database, kept separately from the research data detailed above. The 'validity' of my consent is conditional upon the University complying with the Data Protection Act and I understand that I can request my details be removed from this database at any time.	

Appendix B

Data Protection

I understand that information collected about me during my participation in this study will be stored in a locked cupboard or on a password protected computer and that this information will only be used for the purpose of this study. All files containing any personal data will be made anonymous.

_____	_____	_____
Name of Participant	Date	Signature

_____	_____	_____
Name of Person	Date	Signaturetaking consent

UNIVERSITY OF Southampton

Faculty of Health Sciences Level 3, Room 3005 University of SouthamptonHighfield
SouthamptonSO17 1BJ
Tel 02380 597899

Study Title: A Qualitative Collective Case Study of Nurses' Use of History Taking andPhysical Assessment in Adult Acute Care Settings.
Dear (Name or Acute Care Nurse)

I am writing to you because you have undertaken some type of training/education in History Taking and Physical Assessment and are currently involved in aspects of adult patients care within an acute care setting. Therefore I would like to invite you to take part in a focus group discussion to talk to others and share your views and experiences of your use of History Taking and Physical Assessment skills. This information will form part of my PhD studies exploring nurses' use of these skills in adult acute care settings. At a later date and if you express an interest, there is an opportunity to take part in a follow up audio recorded individual interview.

Before you decide whether or not you would like to take part, I have enclosed a Participant Information Sheet which contains more information about this study and what your involvement would be. Please take time to read the enclosed participant information sheet and take time to think about whether or not you would like to take part.

If you have any questions about the study then please do contact me, Pamela Diggens by email at pd3@soton.ac.uk or by telephone 02380 597889 so I can discuss these with you.

Thank you for taking the time to read this letter.Yours sincerely,

Pamela Diggens

UNIVERSITY OF Southampton

Acute Care Nurse Participant Information Sheet

Study Title: A Qualitative Collective Case Study of Nurses' Use of History Taking and Physical Assessment in Adult Acute Care Settings.

Researcher: Pam Diggens   ERGO number: 31188

Supervisors: Dr Helen Rushforth and Dr Kathleen Kendall   IRAS ID: 227146

You are being invited to take part in this research study. Before deciding if you would like to take part it is important you understand why the research is being done and what your participation would involve. Please read the following information carefully and discuss it with others if you wish. If you are happy to participate you will be asked to sign a consent form.

What is the purpose of the study?

Evidence supports that when nurses receive appropriate training they can perform history taking and physical assessment skills as well as doctors. However less is known about what factors influences nurses use of these skills, changes to nursing practice and impact on patient care, particularly in adult acute care settings. These are areas that this study aims to explore as part of my PhD thesis on nurses' use of History taking and physical assessment in adult acute care settings.

Why have I been chosen?

It is believed you work in an adult acute care area and have undertaken some type of history taking and physical assessment course/training. Therefore your views and experiences of nurses' use of history taking and physical assessment are valuable contributions that you might want to share.

What will happen to me if I take part?

If you decide to take part please contact me so I can discuss the study in full and answer any questions you might have. You will be invited to attend one focus group session (approx. 1 hour), in your own time, to talk with others about nurses' use of History Taking and Physical Assessment skills and share you views and experiences. This will be the maximum amount of time you will be

involved in the study unless you are interested in taking part in a follow up individual interview, at a later date. The focus group will be audio recorded to ensure I capture accurately what is shared. You will be asked to sign a consent form for the focus group and you will be able to keep a copy of this, along with this information sheet for your own records. The focus group will be in a convenient location and refreshments will be provided.

If you chose to take part in a follow up individual interview lasting about 45 minutes, the maximum amount of time you would be involved in the study is around 1 hour 45 minutes. The individual interview will take place within 3 months of your focus group session, to allow time to complete initial data from the Focus Groups to be analysed. This means the maximum length of time you would be involved in the study is 3 months or less.

Are there any benefits in my taking part?

There may be no direct benefits to you, but you might be interested in talking with peers about your views and experiences of nurses' use of these skills in acute care. It is anticipated that the findings from this study will contribute towards our knowledge of existing literature about nurses' use of these skills.

Are there any risks involved?

Whilst History Taking and Physical Assessment is not considered a sensitive topic, there is a very low risk that discussion of information during the focus group and/or individual interview could cause distress. In this situation, I would immediately stop any activity; recording or note taking and offer appropriate support.

Additionally, it is highly unlikely but in the event that you disclose something which may cause harm to yourself or others I may need to discuss this further with you and, if necessary, talk to my supervisors about the best course of action.

Will my participation be confidential?

It is possible that you may know other participants (nurses) at the focus group and due to the nature of focus groups it is not possible to guarantee absolute anonymity. However, I will ask everyone to please not talk about what was shared during the interview. To aid discussion during the focus group first names only will be used, but I will remove them later. To maintain confidentiality all documentation will be coded. I will only share information where necessary with my supervisors to achieve my study but I will maintain your anonymity. Personally identifiable data will be stored securely in a locked cupboard or on a password protected

computer at the University. It will be stored for 10 years then destroyed securely.

What happens if I change my mind?

You may withdraw from the study at any time without having to give any reason. I will not inform anyone of your decision and it will not affect your relationship with the University or your employment. Once the focus group session has completed it will not be possible to extract any information you have given. It will not be possible to extract information from the interview once it has been transcribed.

What happens if something goes wrong?

It is highly unlikely but in the case of concern or complaint, please contact the Research Governance Manager who can be contacted by email rgoinfo@soton.ac.uk or 02380 595058

Where can I get more information?

If you are interested in taking part, please contact me, Pamela Diggens at pd3@soton.ac.uk or 02380 597889. If you chose to contact me by telephone, please do leave a message if I am not available so I can get back in touch with you to arrange a convenient time to answer any questions you might have.

Thank you.

Thank you for taking the time to read this information sheet and considering taking part in the study.

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Acute Care Nurse Participant Consent Form for Focus Group

Study title: A Qualitative Collective Case Study of Nurses' Use of History Taking and Physical

Assessment in Adult Acute Care Settings.

Researcher name: Pamela Diggens
Supervisors: Dr Helen Rushforth and Dr Kathleen KendallERGO number: 31188
IRAS ID: 227146

Please initial the box(es) if you agree with the statement(s):

I have read and understood the information sheet and have had the opportunityto ask questions about the study.	
I agree to take part in this research study and agree for my data to be used for the purpose of this study. I understand on completion of the focus group it willnot be possible to have my data extracted.	
I understand my participation is voluntary and I may withdraw at any timewithout it affecting my employment or relationship with the University.	
I will maintain confidentiality of what was talked about in the focus group.	
I would like to express my interest in being contacted at a later date to take partin a follow up audio recorded individual interview.	
I am happy to be contacted regarding other unspecified research projects. I therefore consent to the University retaining my personal details on a database, kept separately from the research data detailed above. The 'validity' of my consent is conditional upon the University complying with the Data Protection Act and I understand that I can request my details be removed from this database at any time.	

Data Protection

I understand that information collected about me during my participation in this study will be

stored in a locked cupboard or on a password protected computer and that this information will

Appendix B

only be used for the purpose of this study. All files containing any personal data will be made
anonymous.

_____	_____	_____
Name of Participant	Date	Signature

_____	_____	_____
Name of Person	Date	Signaturetaking consent

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Study Title: A Qualitative Collective Case Study of Nurses' Use of History Taking and Physical Assessment in Adult Acute Care Settings.

Study Participants Needed

HAVE YOU HAD ANY TYPE OF FORMAL TRAINING AND/OR EDUCATION IN THE USE OF **HISTORY TAKING AND PHYSICAL ASSESSMENT** SKILLS?

ARE YOU A REGISTERED NURSE INVOLVED IN **ANY ASPECT** OF PATIENTS CARE IN ADULT ACUTE CARE AREAS?

If you answer **YES** to both of these questions then you might be eligible to take part in this study exploring nurses' use of these skills. This would involve you taking part in **ONE** focus group interview (approx. 1 hour). And possibly at a later date, take part in **ONE** individual interview (lasting about 45 minutes).

If you would like to find out more please contact me, Pamela Diggens at pd3@soton.ac.uk or telephone 02380 597889. If I am not available please leave me a message with your name, contact details (email/telephone number) so I can return your call. Thank you, Pamela.

Appendix C   Focus Group and Interview Guides

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Focus Group Topic Guide (draft version 1.0)

On participants arrival, greet and check a consent form is signed (participant has a copy). Ask participant to complete demographic form and serve refreshments. Give one courtesy call to any expected participants who has not arrived prior to the FG start time. If possible, determine if they are nearby or coming to the FG. In the event that this is undetermined or they are not coming place 'interview in progress' sign on external side of the door prior to commencing the FG.

<u>Facilitator Introductory Prompt.</u>

Hello my name is Pam and I will be facilitating today's session. Thank you for all taking the time to come today. I will treat information confidential but for today we will use first names only which I will remove later. Please respect everyone's confidentiality and anonymity by not discussing information shared today outside this FG and do not use anyone's name (colleagues/patients) who is not present here today. I am audio recording the session to capture what you say but I might occasionally make notes. So everyone can hear you, please talk one at a time and speak up clearly.

As we only have 45 minutes I may have to shorten the discussion to move on to another topic. The focus of this session is to talk about nurses' use of History Taking and Physical Assessment (HTPA) skills in acute care so please feel free to respond to each other about these topics. Please share your thoughts as everyone's view is important. There may be a range of opinions so please do not worry if your view differs from others as there are no right or wrong answers.

General introductory ice breaker question:

If you can start by introducing yourself using your first name only. I will go first…

Question 1: When nurses use HTPA Skills, what things help nurses to use them?

Prompts – time, supervision, support (colleagues, doctors, nurses, managers), confidence, role, training/education, job satisfaction, opportunity to practice.

Probes – Can you tell me more about that/give an example, does anyone have anything different to add, why do you think that, how might that help, who does it benefit? Is there anything not

mentioned that might/could help nurses use skill/s.

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Question 2: What things hinder nurses to use HTPA skills?

Prompts – time, supervision – being observed, lack of support (colleagues, doctors, nurses, managers), lack confidence, role, training/education, lack opportunity to practice, job dissatisfaction.

Probes – Can you tell me more about that/give an example, does anyone have anything different to add, why do you think that, how might that help/not help? Is there anything not mentioned that might/could prevent nurses using skill/s.

Question 3: How do you think nurses' practice changes when they use HTPA skills?

Prompts – history taking, communication skills (colleagues, patient, family), assessment, reporting/triaging to senior colleagues (medics), changes to nursing care (repositioning patient, administer prescribed prn medication etc), documentation, role, abnormal v normal findings (recognition/understanding), treatment/interventions – prescribing medication/requesting investigations, job satisfaction (increased/decreased).

Probes – Can you explain what you mean by that, can you give me an example, how do you feel about that/these changes, why do you consider them positive/less positive, why might that be important/unimportant, relevant/irrelevant, why do you think these changes happen/don't happen?

Question 4: When nurses use HTPA skills, how do you think this impacts on patient care?

Prompts – more/less holistic care, quicker/slower intervention or triage, patients feel more satisfied/less satisfied, patient outcomes improve/less improved, longer/shorter stay in hospital, less/more complications, changes in patients condition recognized and acted upon quicker/not recognized.

Probes – How do you feel about that, can you tell me more, can you give an example, why do you think/feel that, can you give me an example, what happened in that situation, what could have been different?

Prompts and probes may vary amongst groups but essence of them remains the same

Facilitator Closing Prompt:

I would like to thank everyone for contributing and sharing their views/experiences. In summary you talked about (summarise key points), can I confirm if this is correct? Does anyone want to include anything not already mentioned? That concludes this session, thank you. Switch off audio recorder and allow for debrief.

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Nurse Interview Guide (Follow up to Focus Group)
On arrival, greet and check a consent form is signed (participant has a copy). Place 'interview in progress' sign on external side of the door prior to commencing the interview.
Interviewer Introductory Prompt.

Thank you for taking time to come today and take part in a follow up interview. I will treat information confidential but for today we will use first names only which I will remove later. Please respect others confidentiality and anonymity by not discussing information shared today outside this FG and do not use anyone's name (colleagues/patients) who is not present here today. I am audio recording the session to capture what you say but I might occasionally make notes.
We have about 35 minutes and I would like to focus more about nurses' use of History Taking and Physical Assessment (HTPA) skills in acute care. Please share your thoughts as everyone's view is important. There may be a range of opinions so please do not worry if your view differs from others as there are no right or wrong answers.

Q1 – In your current nursing practice tell me what a typical day is like for you?
Probes – what are your responsibilities (patient intervention, communication/documentation), how would you describe your role (delegate tasks, support/supervise/mentor others), how do you use HTPA skills now (selectively, all time), how do HTPA skills help you, how would you describe your relationship with other staff (nurses, doctors, managers, others), what about job satisfaction, what personal characteristics did you have that helped you to do your role (motivation, assertiveness)

Q2 – How does your current nursing practice compare with your nursing practice before your learnt HTPA skills?
Probes – what were your responsibilities, how would you describe your previous role (delegation, medications, patient care, tasks) , what personal characteristics have helped you to do your role (motivation, assertiveness, confidence), what about job satisfaction, how would you describe your relationship with other staff (nurses , doctors, managers, others)

Q3 – What led to you learning HTPA skills?
Probes – what were you to use the skills for, did you know what was required of you once you'd learnt these skills (was this made clear to you) or what was required of you from others (organisation, manager, colleagues), how did you feel about learning these skills, what did the learning give you, having learnt these skills were you able to fulfil what was required of you – if not can you tell me more about that, what support, if any, was planned after learning the course, how useful, or not, was this support.

Q4 – What support would you find useful now compared to when you first learnt HTPA skills?

Probes – what about senior support, what might/does senior support provide, refresher/updates (how might these help), clinical supervision (peers/doctors), what about support from others (managers/organisation)

Q5 – How might patient care differ when nurses use these skills compared to doctors?
Probes – nursing intervention/treatment/assessment/escalate concerns/decision making/ continuity care, what about communication with other (nurses, patients, doctors), what about relationships with others (nurses, patients, relatives, others), what about patients' satisfaction.

Q6 – How might other nurses, like ward nurses use these skills, or not?Probes – what might help/hinder ward nurses use of skills,

Appendix D   Initial Themes and Codes
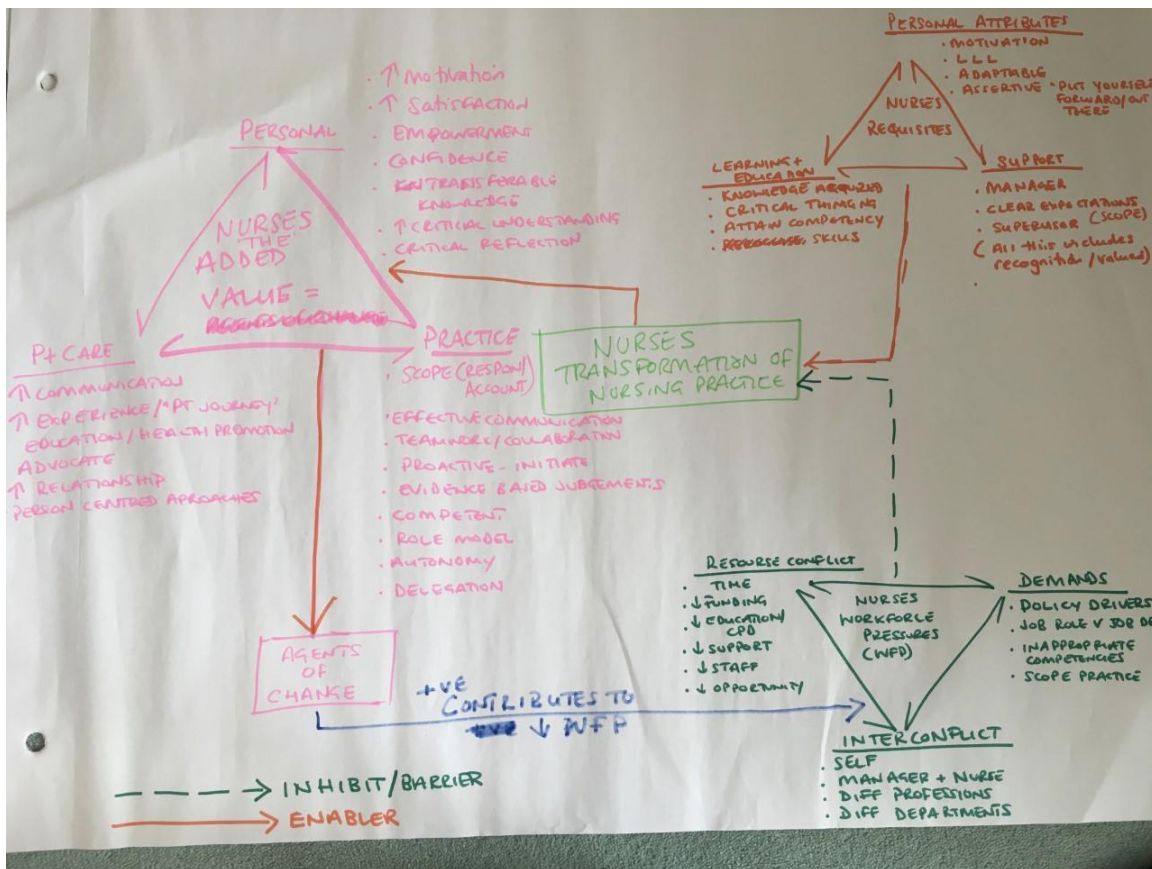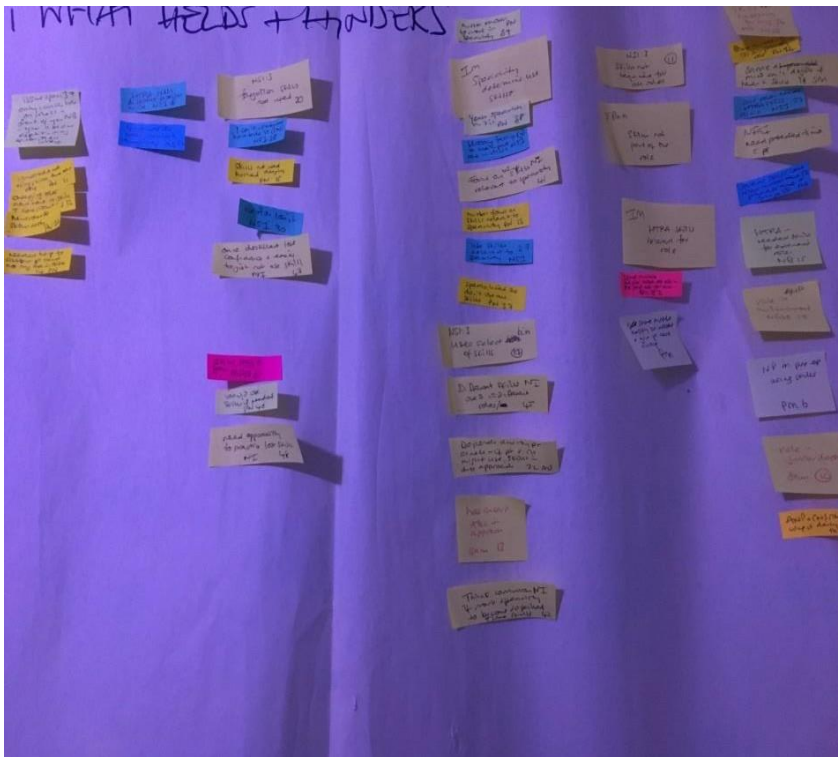
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