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Non-Technical Competence for UK Military Nurses in their Operational and Non-Deployed Roles: A Grounded Theory Investigation.

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Abstract

Introduction

British military nurses are required to deploy to some of the most challenging and austere environments to deal with an array of situations. Within the UK, their preparation for deployment is undertaken within the NHS. Whilst clinical technical competence requirements are widely covered in the literature and national clinical guidance, there is a dearth of information on non-technical competence (NTC). This results in a lack of clarity in NTC expectations of military nurses in both their operational and UK roles, which in turn impacts on the assessment and assurance of deploying individuals and teams. This study investigates what non-technical competencies are required by military nurses and how these can be structured to guide a future assurance process.

Method

Using a Straussian Grounded Theory method, twenty-six clinicians from a variety of military settings were interviewed across four focus groups. The initial purposive sample and question schedule was then refined using a theoretical sampling approach. The resulting qualitative data was coded to identify core themes and a theoretical structure firmly grounded in the data.

Findings

The coding process revealed a substantive theory grounded in the data which organised British military nurse competence as a structure of competence domains relevant to their non-deployed and operational roles. Within this framework, participants identified emotional intelligence, leadership, and communication as non-technical competence domains sandwiched between general underlying characteristics and technical competence. Continued exploration of the data facilitated emergence of a formal theory based on the four Cs of conditions, construct, and conduct underpinned by the core theme of context. This second theory provides a competence structure, based on the findings for British military nurses, which can be applied to wider professional settings.

Conclusion

The development of a theoretical structure for military nurse NTC, grounded in the views and experiences of military nurses is an important step in understanding their operational roles and what can be done to support preparation in the UK. In doing so, it creates a new, valid basis for professional development and organisational assurance for the deployment into the some of the most demanding settings in the world.

Acknowledgements

I would like to thank Professor Wilfred McSherry and Dr Adam Boughey, as my university supervisors, for their patience, support, and constructive input throughout this research study. This is extended to Group Captain Diane Lamb, my Defence supervisor, whose faith, and belief in both me and the project, has helped guide me to completion. I would also thank my wife Clair who has endured my ramblings, musings, highs, and lows over the past three years.

I thank all participants of this study whose service, insight, candour, and time has been invaluable in gaining understanding of the role British military nurses play and how non-technical competence is a core aspect of that. Without their input, this study would not have been possible.

Dedication

This thesis is dedicated to my grandparents Pete and Connie who were my inspiration to become a nurse and without whom I would not be where I am today.

Contents

Glossary and Abbreviations

Term	Abbreviation	Description
Allied Health Professionals	AHPs	Non-medical and nursing clinicians.
Army Medical Services Training Centre	AMSTC	Training centre based in Yorkshire to assure all deploying ground medical assets.
Army Scientific Advisory Committee	ASAC	One of the three single service scientific advisory committees
Automated Serious Event Report	ASER	Current incident reporting process used in the DMS.
British Army Training Unit Kenya	BATUK	
Care Quality Commission	CQC	
Chief Nursing Officer	CNO	Lead nurse for either a Single Service or Defence collectively. Ranked Captain, Colonel, or Group Captain respectively.
Civil Military Relations	CMR	
Commanding Officer	CO	Officer appointed as Commander of a unit or organisation.
Commissioned Officer		Personnel who have attended a Single Service commissioning course ranked OF1 or above
Defence Medical Services	DMS	Tri-Service Medical Organisation
Defence Medical Services Research Steering Group	DMSRSG	
Defence Operational Nursing Competencies	DONC	Competence Framework used for assurance of Defence Nursing Personnel
Defence Specialist Advisor	DSA	
Department of Health and Social Care	DH	
Force Establishment Table	FET	Table established for each deploying unit on the number and nature of personnel required for the nominated deployment.
Head of Department	HOD	

Health and Safety Executive	HSE	
Humanitarian and Disaster Relief Operations	HADRO	
Individual Augmentees	IA	Personnel added to a deploying unit to ensure all required staffing lines are filled.
Joint		Referring to combination of Navy, Army, and/or RAF assets.
Joint Doctrine Publication	JDP	Series of doctrinal publications used when all three services are working/deployed jointly.
Joint Hospital Group	JHG	Command pillar responsible for joint secondary care military personnel – consisting of 5 units and under command of UKStratCom
Joint Service Policy	JSP	Series of policy documents used in tri-service settings
Junior Non-Commissioned Officer	JNCO	Personnel ranked below OR5
Junior Officers' Tactical Course	JOTAC	
Knowledge and Skills Framework	KSF	
Military Assistance to Civilian Authority	MACA	Assistance given by military organisations in response to a request from civil authorities.
Military Analysis	MA	Face to face taught courses designed to explore aspects of military functioning such as the application of force (MA-A and MA-B).
Military Knowledge	MK	Online military training specific to aspects of military function and capability.
Ministry of Defence	MOD	
Ministry of Defence Research Ethics Committee	MODREC	
National Association of Colleges and Employers	NACE	US organisation consisting of colleges and employers to support graduating students.
National Health Service	NHS	

Non-Government Organisation	NGO	
Non-technical Competence	NTC	
North Atlantic Treaty Organisation	NATO	
Notional Value of Service Personnel	NVSP	The contractual term used to determine the financial value of service provided by military personnel to the NHS. Used to calculate charges to the NHS for military staff.
Nursing and Midwifery Council	NMC	UK Nursing regulatory body.
Officer Commanding	OC	Officer appointed to a command position within an organisation without necessarily being the Commanding Officer
Officer Commanding Nursing	OCN	Officer appointed to a command position for nurses and other AHPs
Op GRITROCK		Operations in Sierra Leone 2014-2015
Op HERRICK		Operations in Afghanistan 2002-2014
Op TELIC		Operations in Iraq 2003-2011
Op TRENTON		Operations in South Sudan 2016-2020
Online Focus Group	OFG	
Operating Department Practitioner	ODP	
Organisation for economic co-operations and development	OECD	
Problem, Intervention, Comparison, Outcome	PICO	
Personal Protective Equipment	PPE	
Preferred Reporting Items for Systematic Reviews and Meta-analyses.	PRISMA	

Regular Service		Full time serving members of the Armed Forces.
Reserve Service		Part time serving members of the Armed Forces.
Royal Air Force	RAF	
Royal Navy	RN	
Second in Command	2IC	
Senior Non-Commissioned Officer	SNCO	Personnel ranked OR6[1] or above
Single Service	sS	Referring to Navy, Army, or RAF as an individual organisation.
Specialist Nurse		Defined in JSP950 Leaflet 4-1-4 as a nurse who has attained 60 level 6 or 7 academic credits on an approved course supported by completion of a specified set of clinical competencies.
Specialist Nurse Advisor	SNA	Single service specialist nurse to advise the relevant CNO on matters within their clinical area.
Suitably qualified and experienced person	SQEP	
Staff Officer	SO	Military Officers in Staff and Command positions – SO1, 2 and 3.
United Nations	UN	
United Nations Inter-Agency Standing Committee	UN IASC	
United Nations Office for the Co-ordination of Humanitarian Affairs	UN OCHA	
UK Strategic Command	UKStratCom	4* Joint Headquarters
Vehicle Check Point	VCP	

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[1] [NATO STANAG 2116 Grades of Military Personnel Ed 7 (2021)](#)

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CHAPTER 1 – Introduction and Relevance to Military Nursing

1.1 Introduction

Competence is a term widely used in both general and professional conversation and whilst there is a tacit understanding of what it implies, it is far more challenging to assign a definitive and universally agreed meaning (Weinert, 1999). Vitello et al (2021) argued that the complex and subjective nature of competence makes finding a definition both deeply challenging and highly illusive. They add that factors such as context and the drivers behind creating a definition add tiers of complexity. This makes it difficult to describe competence in a way where it can be applied equally across educational and employment domains.

Use of language around competence often conjures words such as 'qualification', 'ability' or 'skilled'. Hager and Gonczi (1996) noted that many consider competence to mean the ability to do or being appropriately qualified. Confusion over the term is compounded further by untidy application of the terms such as 'knowledge' or 'skills' as well as the interchangeable use of competence and competency (Eraut, 1998). Eraut (1998) additionally comments that the social understanding and use of the term competence is akin to performance. This chimes with many dictionary definitions[2] which centre on the ability to perform a task successfully or efficiently but fails to fully explore the complexities of competence. The lack of a consistent approach, interests driven by stakeholders and the

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[2] Competence Definition & Usage Examples | Dictionary.com and competence - Quick search results | Oxford English Dictionary (oed.com)

application of a plethora of terms led to Klink and Boon (2002) to acknowledge the need, and useful nature of defining competence but ultimately described it as a 'fuzzy' concept.

1.2 Relevance to Military Nursing

Competence stands at the core of delivering nursing care. The ability to meet a patient's needs in the context of the setting and events, is an essential aspect of the nursing role. The expectation for nurses to be competent in all they do is so important that it has become enshrined in both law and regulatory process. Within the United Kingdom, all care providers are required through legislation to ensure the professionals they employ are suitably experienced and skilled to carry out the roles they are assigned (UK Gov, 2014). This is enforced through the Care Quality Care Quality Commission who mandate that all employers must have robust processes in place to meet the maintenance and development of professional competence (CQC, 2022). Professional regulation through the Nursing and Midwifery Council (NMC), places the burden with the nurse to meet and maintain the competence standard required of their jobs (NMC, 2020, 2018a). In addition, there is also the moral obligation of nurses to be competent not only to meet the need of their patients but to continue to build trust in the profession. In both their regulatory and moral commitments, UK military nurses are congruent with their civilian counterparts. Indeed, exposure to the secondary care setting to maintain competence takes place within the NHS and as such they are bound the

same requirements. However, military nurses are not an NHS asset and as such are subject to operational deployment, often at short notice to challenging or dangerous environments.

Exploration of the literature shows several motivations for military involvement in healthcare beyond the treatment of battle casualties (Gibson-Fall, 2020; Michaud et al, 2019; McInnes and Rushton, 2014):

1. Promotion of medical stability as part of counterterrorism and insurgency measures.

2. Partnership and capacity building.

3. Civil-military collaboration in response to large scale natural disasters or humanitarian crises.

4. Health security in response to increasingly globalised infectious disease risk.

5. Integrated exercises and research to support development of allied military capability.

The way in which military nurses are deployed is dependent upon the situation and the nature of the national military-civilian relationship. In

exploration of the use of militaries in the global Covid-19 pandemic, Gibson-Fall (2020) identified three general trends. The first of these was based on specific technical support to civilian authorities who maintained the lead throughout. This was often founded on the requirement for niche abilities such as logistical support and reduced pressure on those elements of the civilian response. The second trend was based on a blended military-civilian response. This remained based on the premise of the military support being subservient to civilian leadership but once again used the highly technical abilities of the military in specialist areas. In some countries for example, this manifested as the building of additional hospital capacity to support increasing numbers of patients or the procurement and movement of PPE across the civilian health sector. The final trend was based on military-led responses. Whilst there were varying degrees of civilian collaboration, the military led response resulted in an array of decisions and processes normally undertaken by civil agencies and governments.

Often military assets are deployed in response to a perceived healthcare threat or developing security situation. The unique skills and attributes military organisations can bring to dealing with safeguarding populations can have considerable effect. However, deployment of military nurses can be contentious through perceived militarisation of healthcare or the political motivations for its deployment. Consequently, humanitarian principles of independence, neutrality and impartiality can come into direct conflict with

military mission goals (Gibson-Fall, 2020; Michaud et al, 2019). This is worsened further by the lack of adherence of state and non-state actors to the Geneva Conventions which explicitly prohibit targeting of civilians or the withholding of access to medical care. This results in suspicion and erosion in trust of healthcare providers, disrupting access to healthcare provision and led to the United Nations declaring use of military assets as a last resort in humanitarian relief (UN, 2007). However, the swift mobilisation of military capabilities, such as nurses, as first responders can provide life-saving resources and prevent civilian services from being overwhelmed. Boland et al (2021) argued that this is but one contradiction within the guidance which can have a direct effect on affected communities. They went on to identify that the recent Covid-19 pandemic and previous West Africa Ebola outbreak highlight a gap in coverage of guidance for both disease outbreak and the domestic use of civil-military relations during times of crisis. They urged an update which would reflect the way in which the world has changed since the publication of the guiding documents.

British Military nurses are no exception and have a long history of deploying into arenas around the globe. In line with UN OCHA guidance, the British healthcare assets are seen as a last resort, only deployed when the Foreign, Commonwealth and Development Office (FCDO) identifies a need and requests support (MoD, 2016). These deployed operations are frequently to complex environments where lines are blurred by military, civilian and non-state actors making military healthcare interventions both

contested and complicated. Agazio (2010) described these as *'military operations other than war'* (p.166) and recent examples of UK deployments include operations in South Sudan supporting UN peacekeeping, Sierra Leone as part of the UK response to the West Africa Ebola outbreak and ongoing Middle Eastern counter insurgency operations. The most recent example of extensive UK deployment was military assistance to civilian authority (MACA) during the Covid outbreak. As with many countries, the UK domestic use of military personnel during this period represented an unprecedented deployment in modern times (Kalkman, 2021). As detailed by Gibson-Fall (2020), the British Defence Medical Services worked closely with civilian partners who remained the lead authority throughout. Consequently, specific defence assets and skilled personnel were used to provide support in planning and delivery of logistics, building of Nightingale hospitals, 'track and trace' of those infected, direct patient care and perhaps unusually, in the immunisation program. Simm (2019) argued that while there are considerable issues associated with the deployment of military healthcare assets, the question is not whether they should be used but rather how they can be best used.

The diversity of the military role and the requirement to be adaptive between environments and situations places considerable demands on nurse competence. Much of the existing literature is overwhelmingly focused on clinical procedural competence, as represented by the Defence Operational Nursing Competence or DONC framework (MoD, 2010). Even

the NMC, as the regulatory body provide little specific guidance beyond stating nurses are required to be competent for role. Whilst delivery of technical competence is an important aspect of nursing delivery regardless of setting, the ability to use non-technical skills to deliver this care in the most challenging environments is disproportionately under-addressed. Exploration of available literature demonstrates current research exploring the non-technical competence requirements of military (or indeed civilian) nurses is lacking.

1.3 Overview of this thesis

This thesis comprises of seven chapters, each outlining a stage of the research process. This chapter provides an introduction and the relevance to military nursing. Chapter two justifies the requirement based on personal, professional, and conceptual perspectives. Chapter three contains the literature review which is split into two separate parts. The first addresses competence as a broad concept including psychological and behavioural underpinnings and an exploration of non-technical competence. The second provides a contextual appraisal of military nurse non-technical competence. This examination of the existing literature helped to understanding the components of competence, contemporary debates surrounding the core issues and the associated challenges in defining and assuring British military nurse non-technical competence. It also helped to shape the question, aims and objectives of this investigation.

Chapter four outlines the methodology and is split into two parts. The first explores the origins of GT, development of GT canon and justification of the method employed to meet the aims and objectives of the study. The second part explains the methodological steps taken within the selected GT approach. This includes sampling, ethical considerations, recruitment, data collection, and data analysis. It concludes with an exploration of reflexivity and the considerations explored to ensure that both reader and researcher are theoretically sensitised to any issues which may have influenced this study. Chapter five outlines the findings of the focus groups and chapter six discusses the emerging formal and substantive theories in context with the wider implications for military nurses. Chapter seven provides a conclusion to the study and its resulting recommendations for the structure of British military nurse NTC.

CHAPTER 2 – Background to this Study

2.1 Introduction

Competence is widely banded around in conversational and workplace lexicons. In line with dictionary definitions, it is often associated with other terms such as qualified, able, trained, or competency (Weinert, 1999). Despite wide use of the term in everyday language, it is broadly considered to have first been used within a scientific context by the psychologist Robert White in 1959. Whilst acknowledging the everyday meaning, he applied the term more specifically to describe the ability of an organism to successfully interact with their environment. Although not necessarily discussing within an occupational or professional context, he related human competence to the motivation to satisfy the inherent need to cope with the challenges of the settings in which they live, work, or play. White asserted that the development of competence was not acquired just through behaviour based on human drives but rather, a persistent, deliberate, and specific pattern of behaviour to acquire the skills necessary for the environment. In doing so, a level of satisfaction is achieved which reflects both suitable stimulation within the setting and avoidance of anxiety associated with failure to master the required abilities. This perspective of competence within human development is reflected further by Mansfield (2004). Although writing about professional competence, he used the process by which babies learn to crawl and then walk to demonstrate becoming competent in a skill many of us take for granted. Whilst one may not

consider application of competence to such a commonly used motor skill, there are clear implications in not being competent.

Vitello et al (2021) noted the idea of competence having proliferated across the educational and training settings resulting in a profound impact on application of language and understanding of both the user and organisations on how competence is applied in practice. Although there is a generally held view on what competence means, there is far less clarity when considering the nuances or complexities associated with its use in specific settings and, the professional environment (Hager and Gonczi, 1996). Contemporary use of the term is further confused by the rhetoric around application and positional statements of competence held by different people and organisations. This obscures the truth and adds to a lack of precise understanding of what competence is, whether it can be accurately measured or even whether it is something that can be taught (Schneider, 2019; Short 1985).

Within nursing, competence has long been a key aspect of professional behaviour and delivery of quality care (Meretoja et al, 2015). However, the conceptual and professional debate around competence is equally relevant. Licen and Plazar (2019) argued that despite the discourse on nursing competence, the profession is no closer to an agreed definition. Indeed, the application of varied language or terms such as competence or competency, which hold both scientific meaning in specific circumstances

or more vague meaning in everyday terminology, contributes further to the lack of specificity when applied to nursing (Licen and Plazar, 2019; Teodorescu, 2006).

This lack of clarity creates challenges for nurses, civilian and military alike, to understand what competence looks like and how it can be applied and measured. This chapter explores some of the complicated conceptual and professional background to competence. Combining these with personal drivers of the primary investigator (PI) to demonstrate the motivations for developing how British military nursing is delivered on operations and how British Military nurses prepare for this in their UK roles.

2.2 Conceptual

The term competence can hold scientific meaning when applied in specific circumstances but also has a far vaguer meaning when used in normal conversation. This heterogenous and subjective use of competence terminology makes it far more challenging to develop a universally accepted definition (Le Deist and Winterton, 2005; Weinert, 1999). It also presents the danger of over-simplification, creating a narrow, binary, and task-orientated definition which does not reflect the nuances and complexities of what it means to be competent (Eraut, 1998; Hager and Gonczi, 1996).

In exploring psychological approaches to competence Weinert (1999) wrote his report entitled *'Concepts of Competence'*. In this, he evaluated 9 key models ranging from use of cognitive competence to application of meta-competencies. He identified that each model made differing assumptions about nature of competence and the setting in which they were used. In doing so, he concluded that use of the term in every day and professional circles, demonstrated both a lack of common theoretical roots and inconsistent application across scientific worlds. Wide exploration by psychologists, educationalists, and professional settings has generated an array of definitions that Weinert (1999) felt were too broad and frequently failed to capture the specifics required for competence, in the context in which it is being used.

Like Weinert (1998), Mansfield (2004) identified five variances in meaning within the English language relating to competence. These include the overarching performance of a person in their job, the tasks being carried out for their role or environment, use as a term to describe an element of wider competence, and the underlying characteristics of the individual. His analysis led him to conclude that the same conflicting yet overlapping terminology was being used to describe three distinct areas; outcomes (what people need to do in their employment), tasks, and personal traits or qualities. He described competence in terms of being either narrow or broad. The narrow view, driven by efficiency, is task orientated based on bureaucratic systems in which there is a limited view of people and wider

ability. Through this narrow lens, the competent are those able to efficiently perform tasks based on occupational requirement. In contrast, the broader view requires people to take a more flexible approach to their roles. Being able to adapt to changing situations and having the versatility to problem solve which allows development of 'occupational breadth' (p.303). These narrow and broad perspectives are not mutually exclusive but broad competence has grown to be the domain of professional occupations.

Considering the views of these authors, the challenge surrounding defining competence as a concept is to be rooted in subjectivity and contextual variance. If competence is such a difficult thing to define, then why try it? The implications of competence are far-reaching and are relevant for both the delivery of a service or product as well as the providing organisation. Vitello et al (2021) made 4 key arguments for defining competence:

1. Facilitation of an analytical approach to teaching and learning.

2. Describing competence allows teaching, assessment, and subsequent certification to broken down appropriately to provide a high-quality approach.

3. Enables conversation and decisions on key features of competence to be kept at the forefront of organisational learning and development.

4.   Allows service users to engage with the organisation to influence how competence is taught and assessed.

The Organisation for Economic Co-Operation and Development (OECD) support these notions arguing the positive effects that competence has on individuals, organisations, and wider society (OECD, 2005). They add that not only is competence a factor in coping with the world, but it is a key in shaping it.

The Health and Safety Executive (HSE), however, takes a stance which is centred on risk aversion (HSE, 2023). In considering competence within a workplace, they argue that priority must be given to the risks which occur most often, and which have the most severe outcomes. Whilst acknowledging competence is relative to the role being played, they demand that workers are competent for what they are doing and that managers create a culture in which this can be achieved. Failure to meet competence requirements has inevitably poor outcomes for role delivery but there is also the risk of wider consequences including the wastage of money on poorly designed teaching, omission of important content, wasting of learner's time and perpetuation of poor teaching techniques within an organisation (Vitello et al, 2021). In describing a messy world of understanding competence, Eraut (1998) noted that some argue the idea as having limited value and branding the notion as behaviourist or

modernist. He continues by noting that they are unlikely to see

incompetence in the same way.

2.3 Professional

Eraut (1998) highlights that seeking to define nursing competence enables

the public to understand professional expectations. This is countered by the

danger he cites in setting competence standards to levels indicating the

minimum accepted rather than best practice. Nurse competence is both

nebulous and difficult to define, frequently viewed as a composition of

wider, unclear terms such as expertise, performance, or ability which are

regularly used interchangeably (Smith 2012; Clark and Holmes, 2007). The

challenge of defining nursing competence is perhaps best seen in the UK

regulatory approach from the Nursing and Midwifery Council (NMC) who

fail to sufficiently define competence in either of their Code of Conduct

(NMC, 2018a) or competence documents (NMC, 2015).

This confusing approach to nursing competence is frequently founded on

technical aspects of care with nurses required to demonstrate ability to

execute skills with underpinning knowledge (Missen et al, 2015).

Leonardson et al (2020) identify that technical skills are a central aspect of

nursing, citing the requirement of all nurses to have a collection of

psychomotor skills to support the needs of the patient. In this context of

clinical skills, Watson et al (2002) argued, perhaps a little simplistically, that

nursing competence is the absence of incompetence. However, they went on to urge caution in such an approach with the danger of nursing competence being viewed only as the successful completion of a series of skills or tasks. In differentiating competence with expertise, Eraut (1998) also noted that in some situations, the competent completion of a task or skill may well be what is required. But, referring to someone as competent based on executing a singular skill, when specialist skills, knowledge and understanding is required would be borderline insulting.

Whilst there is literature pertaining to wider aspects of nursing such as leadership (Franks-Meeks, 2017), the focus remains dominated by the ability to perform the technical aspects of the role. This approach to heterogenous clumping of skills under the bracket of competence offers little to the educational and clinical development of nurses and, with minimal focus on the non-technical elements, offers little to improve patient safety or quality in care (Gordon et al, 2014). Within the British Military, the assurance of nursing competence is achieved through the Defence Operational Nursing Competence (DONC) framework (MoD, 2010). This document reinforces the technical skill dominated approach to nursing, with little consideration of what Teichnann and Rüütmann (2013) described as non-technical competence (NTC). Interestingly, Calman (2006) observed that many patients assume nurses are technically capable but use their NTC abilities to make judgements on their overall competence.

Unlike their civilian counterparts though, British military nurses work in both NHS and operational settings. This results in having to meet the clinical and management competence demands of two organisations. Whilst kit and equipment may vary due to operational limitations, clinical procedural or technical competence has commonality between each setting. Indeed, many of the standards set in NICE guidance are applied throughout military clinical practice in the Clinical Guidelines for Operations or CGOs (MoD, 2013[3]). This means many of the clinical skills are transferable to the operational setting. Yet despite the technical clinical comparisons, British military nurses working in the NHS often feel under-prepared for the rigors of the deployed setting (Finnegan et al, 2015; Beaumont and Allan, 2014). Nurses in both studies reflected the clinical demands of poly-trauma and complicated medicine, environmental factors associated with working in war zones, the young patient population which often included children, and the different nursing roles and organisational structures of military health care as challenges they were not exposed to in the NHS.

2.4 Personal

The discussion surrounding competence in nursing is personal and the background to this study is deeply rooted in researcher experience of both the civilian and military environments. Following a decade working in the

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[3] Last public version available was published 2013. This has now been withdrawn to an online version only available to users on the Defence Gateway.

NHS prior to joining the military and fifteen years of Service including multiple operational deployments, one has encountered a broad range of understanding of what competence is and how it affects personal practice. Coming across people who seem to effortlessly meet their goals, inspire those around them, communicate strongly but compassionately with others and support their team through the toughest of situations or indeed displaying the opposite of these qualities, led to the question *'what makes a good operator?'*. It is only when musing over what was meant by a good operator that the issue of competence comes acutely into focus. The approach to technical competence, based on ensuring practical procedures are completed safely and effectively, is well established. These measurable elements to competence can be monitored and frequently form the centre point of legislation based, regulatory or organisational requirements for practitioners. This is often supported by a means of development or management when standards fall below what is expected. However, the same cannot be said for NTC where requirements are poorly articulated, subjectively assessed and where there is no structured approach to development.

Whilst there is a need for individuality (something the Army encourages through mission command), there remains a requirement to understand how NTC is constructed and the ways in which competencies dovetail to give individuals the capabilities to deal with the plethora of situations they may encounter as military nurses. These in turn can have positive

outcomes based on team cohesion in demanding settings and the organisational assurance that deploying teams have the necessary abilities to function under the most oppressive stress of the operational environment. It may seem that professional growth and team development are the driving forces behind such work but, it is in fact the patient. Although appearing altruistic in nature, the delivery of high quality, operational nursing care must primarily be around giving deployed personnel the confidence that should the worst happen, they will receive the best possible treatment from a highly skilled and cohesive clinical team.

The motivation to deliver exemplary care in the most challenging of circumstances, underpins the drive to develop the way in which military nurses meet this goal. Seeking to grow and develop non-technical competence though remains difficult without having broadly understood requirements and standards. Without this, advice on personal and career development within military nursing remains subjective. Support from leaders is inconsistent, based on their experiences, biases (conscious or unconscious) and their own encounters and views of NTC. Furthermore, these influence the assessment and assurance of deploying teams resulting in variable performance. In considering a starting point for this research there was development from 'what makes a good operator?' to 'what does non-technical competence for military nurses look like and how would this be constructed into a practical application?'. This evolution was based on providing guidance and support to facilitate the NTC development

in juniors, guiding the more experienced members of the team in how best to nurture this aspect of military nursing and giving Defence as an organisation a lens through which NTC could be seen and, in future assured.

2.5 Conclusion

Gonczi (1994) noted that competence is viewed in two ways. The first is task based or behaviourist driven by discrete behaviours or "atomised" tasks (p.28) and the second based on personal attributes which enable delivery of effective performance. He noted that whilst the former of these risks' competence being viewed as reductionist, ignoring processes which enhance group or professional outcomes, it does cater for some technical elements which can be monitored and measured. The latter approach includes aspects such as critical thinking or applied knowledge and has become popular within management circles. However, he argued there is little consensus on these generic attributes which are frequently thought of in terms of the domains in which they are being used. The challenge within nursing is the requirement to blend technical competence associated with clinical procedures, with the non-technical competence required to deliver patient care. Indeed, Cowan et al (2007) observed that competence is closely tied with trust of patients in professionals and organisations to safely care for them.

The broad requirement of nurses to deliver against both technical and non-technical skills resulted Cowan et al (2007) concluding that not only is nursing competence extremely difficult to define but would remain a challenge until both are reconciled. Smith (2012) argued that the lack of a universal definition for nurse competence has contributed to the considerable variance in nursing roles between specialities and work environments. The variances between the British military nurse role on operations and within the NHS is typical of this and has resulted in British military nurses reporting feeling underprepared to deploy (Finnegan et al, 2015).

British military nurse technical competence is currently set for a range of specialist clinical settings relevant for the deployed environment, in the DONC framework (MoD, 2010). Based on clinical requirements from national courses such as the Advanced Life Support course run by the UK Resuscitation Council[4], this approach enables nurses to work in the NHS to develop and refine the clinical technical skills likely to be useful on operations. However, there is no specific capturing within the DONC of the non-technical competence requirements for British military nurses. Therefore, a delta exists between understanding of technical and non-technical competence. Driven by personal experience, this study is firmly based in seeking to bridge this gap by investigating the conceptual and

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[4] ALS: 2 Day Course (Advanced Life Support) Course | Resuscitation Council UK

professional requirements of non-technical competence for British military

nurses in their operational and non-deployed roles.

CHAPTER 3 – Literature Review

3.1 Introduction

As identified in the previous chapter, the competence requirements of British military nurses are set through the DONC framework with little attention paid to the non-technical aspects. Motivated by the lack of information in the existing framework, a systematic review undertaken by the PI, as part of a taught module[5], demonstrated this was also reflected in published nursing literature (Hughes, 2021). In revealing only two primary research papers, which were dated against contemporary military operations and with limited practical applicability to the British military nurse setting, this systematic review highlighted a significant gap in knowledge of non-technical competence for British military nurses.

This initial systematic review highlighted the complexities associated with competence, demonstrating little consensus beyond broad, vague terms. Furthermore, there was little understanding of non-technical competence with minimal primary research identifying the requirements of the British military nursing role on operations or in their UK roles. The complex nature of the subject and an earlier completed systematic review, leant well to the use of a narrative approach for deeper exploration of the gaps in literature relevant to this study.

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[5] Literature and systematic review module of the DHSc pathway for which this thesis is the final aspect.

Although narrative review is a less formal process than systematic review, requiring a less rigorous presentation of the data, it is nevertheless, an important means of discussing components of the topic being investigated (Jahan et al, 2016). Whilst narrative reviews are subject to criticism for not employing a peer reviewed methodologies or a specified inclusion or exclusion criteria, they enable broad coverage of the data and flexibility to study emerging issues (Byrne, 2016).

To aid in the narrative process this review has been split into three parts. The first explores the conceptual, psychological, and behavioural origins of competence including exploration of models, of non-technical elements and human factors. The second provides the professional military nursing contextual background for non-technical competence, discussing the current state and difficulties associated with practical use. The final part of this review draws together conclusions resulting in the identification of the research question and aims.

A broad range of data sources have been accessed for all parts of the review and the strategy noted at the start of each part. Resources used include MEDLINE, PUBMED, EMBASE and CINAHL as academic databases. These were supported by library search engines Summon[6] (Staffordshire University) and Find It[7] (University of Birmingham). Further grey literature searches were completed using cited references from papers

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[6] www.Staffs.summon.serialssolutions.com
[7] findit@bham.ac.uk

and Google Scholar. In line with the GT methodology used in this study, this is a cursory review to create a broad understanding of competence and identify what literature exists in relation to military nurse NTC. Further inclusion of wider literature is directed by the investigation and used as a data source contributuing to the emerging theories (Glaser, 1967; Corbin and Strauss, 2015).

3.1.2 Search Strategy

Despite not having the same strict process as systematic review, researchers employing narrative reviews should still seek explain the search process to give academic rigor to the outcomes (Byrne, 2016). To that end Table 1 outlines the initial search terms employed.

Table 1. Search Terms.

Literature Review Section	Search Terms
Part 1	competence, competent, competency, definition, model, theory, concept, defining, and characteristics
Part 2	Nurse, nursing, nurses, competence, competent, competency, skill, clinical, military,

	soldier, armed forces, army, navy, air force, marine, operation, operational, deploy, deployed, deployment, characteristics, NHS.

Each of the terms were used in a variety of combinations to reveal an array of resources. Deeper review of the initial articles identified as suitable based on their abstracts, led to further resources through references which were not easily found due to their age or only being available through military journals. Literature used in this review was dated between 1959 and 2023 and has been used to give a conceptual backdrop to wider issues associated with competence before exploration within the nursing and British military nursing contexts.

3.2 Part 1: Conceptual Understanding of Competence

3.2.1 Defining Competence.

Eraut (1998) argued that understanding of competence is a result of both the explicit and implicit expectations of stakeholders within any given situation, adding that a change in context changes the terms of competence expectations. The notion of a successful car mechanic being competent within healthcare whilst laughable, demonstrates the difficulty in applying a universal approach. However, there are deeper nuances of competence within the professional setting. For example, an experienced and competent medical nurse would not be seen as competent working in

an operating theatre. Consequently, Klieme et al (2008 p.7) challenged those exploring competence to consider the essential question "competent for (doing) what?". They went on to note that any approach to competence development must factor in both personal and situational contexts. Citing the need to be context specific, the OECD (2005) maintained the requirement for any framework to reflect the collective needs of the organisation. Indeed, they highlighted the sum of the competences as having direct impact on the ability of an organisation to meet shared goals. Vitello et al (2021) concluded that regardless of the constituent parts, applied individually or holistically, competence is a multi-faceted concept, shaped by the contextual requirements of the user and the situation. As such they defined competence as:

"…the ability to integrate contextually appropriate knowledge, skills, and psychosocial factors to consistently perform within a specified domain."

(Vitello et al, 2021 p.4)

In exploring competence, Schneider (2019) observed that a combination of incompatible concepts made defining competence in any scientifically measurable way impossible. Motivated by this lack of clarity in the conceptual understanding of competence, she conducted a systematic literature review. Her aim was to contribute to the theoretical understanding and identify a coherent way forward for future investigators. In her review she identified nine papers which defined competence to which she applied

the Kosterec (2016) conceptual analysis model. This approach allows the user to identify the initial conceptual background of the matter being investigated. As the problems and their relationships emerge, the overall concept becomes clearer. As part of the first stage, Schneider identified eight higher level concepts of competence with associated characteristics. Ostensibly these were associated with each of the individual models highlighted in table 2. Her analysis demonstrated considerable conceptual overlap between models with authors defining many of the same characteristics but in different ways to individualise their own approaches. This adds to the challenge is seeking a universal definition and contributes to a confusing picture of competence. In assessing the relationships between each model, using each of the higher-level concepts, Schneider (2019) found little to support competence as a process, relation, or state of integration of resources. Rather, she viewed competence more as a construct based on ability and quality.

Table 2. Higher level concepts and associated characteristics in competence (Schneider, 2019).

Higher level concept	Characteristics	Authors
Ability	Task or role performance Against set or agreed standards	Eraut (1998)

Disposition (as a construct)	Learned Cognitive Demand specific application of context related knowledge and skills integrated	Weinert (1999)
Process	Combination of volition and motivation with performance and outcomes.	Blomeke et al (2015)
Relation	The relationship shared between capability to perform and the ability to complete tasks/roles.	Hager and Gonczi (1996)
State of being	Of person	Short (1985)
Integration and combination of resource	Highly contextual relating to work, personnel and available resources.	Fernandez et al (2012)
Capability	Set against conditions for sustainable function including innovation,	Mulder (2011)

	problem solving and transformation. Contextual to role, organisation, profession, or situation.	
Concept and relationship	Relating to competence context in the workplace.	Velde (1999)

Although her review did not utilise the widely accepted PRISMA model and had several main texts not available in English, her in-depth observations add to the wider discussion. From her analysis she defined competence as a relational concept concluding it as:

"…the cognitive ability to normally successfully perform domain-specific actions of type h under circumstances that are suitable for domain-specific actions of type h." Schneider (2019 p.1954).

In reaching this definition, Schneider (2019) determines that ability is the higher-level concept at the very core of competence. She confirms that competence is having the practical and cognitive abilities to meet the demands of the situation under normal circumstances. In doing so, she places high importance on the domain specificity of the abilities being used but gives capacity for the understanding of competence to be adjusted

when working outside of what is normal. Additionally, she removes the motivational and emotional aspects of competence. For example, one's ability or competence to play the piano is not diminished necessarily by their motivation or emotional state. In essence, her conceptual analysis of multiple models, across educational and psychological domains, led her to describe competence as being the ability to meet demands deeply embedded in the context in which they are being used.

Without providing specific definitions both Blomeke et al (2019) and Fernandez et al (2012) describe competence as being viewed from two perspectives. The first describes competence as a complex holistic characteristic where the synergistic use of a combination of behavioural and cognitive abilities allows users to deal with complex situations. The second takes an analytical approach where the constituent parts whether, motivational, cognitive, or affective, are selected by the individual appropriately to deal with the situation at hand (Fernandez et al, 2012). This second approach is reflective of Mulder's view in which competence is seen as being founded on a combination of knowledge, skills and professional attitudes that are required to be successful. Typically comprised of individual statements for specific aspects of the task or role, this view sees competence is a mix of situation specific responsibilities founded on performance and social meaning. However, these are not exhaustive, and their dynamic nature facilitates personal development of the individual. However, Mulder (2011) also goes on to discuss

competence in terms of legal authority, differentiating that competence can be framed differently when working in a professional capacity, such as nurses or doctors working under the auspices of a regulatory body.

Although not aligned to any specified profession or vocational activity, the Health and Safety Executive (HSE) describes competence in more general terms and does not elaborate on the specific role requirements. In taking this approach, the HSE (2023) takes a strongly and task orientated view, defining competence as:

> *"…the combination of training, skills, experience and knowledge that a person has and their ability to apply them to perform a task safely.***"**[8].

The primary driver within this definition is to reduce incidence of adverse events and places burdens on both the organisation and managers to create a culture of risk avoidance.

Despite authors seeking to distinguish their own theoretical definitions or perspectives, using common language, the application of varying perspectives supports the notion that consensus on competence is entirely lacking (Schneider, 2019; Fernandez et al 2012). This creates challenges for individuals and organisations alike in understanding what is required to successfully work in that setting.

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[8] What is Competence? - Competence in health and safety (hse.gov.uk)

3.2.2 Competence Nomenclature: Competence, Competency, and Skill

From the definitions discussed, a tacit understanding of competence emerges. In general terms, it is a complex mix of abilities and personal factors which allow an individual to achieve success in the role they are playing. However, competence is rarely considered without consideration of wider components or characteristics. In their examination of competence literature, Fernandez et al (2012), concluded that knowledge and skills (used interchangeably with abilities) were widely accepted as core parts of any working definition, but this is where consensus generally ends. Whilst almost all definitions acknowledge that competence is more than knowledge and skills, there is very little agreement on the wider elements and descriptions of what these should be. This led Den Hartogh (2015) to argue that many discussions on competence are flawed as they fail to distinguish between either scaled or binary approaches.

Weinert (1999) considered the role of intelligence in competence acquisition. He concluded that the lack of consensus of intelligence meaning amongst both scientific and lay communities confused the issue. Instead, he considered the classical view of intelligence, based on sound judgement, good thinking, successful learning, and smart actions to be a prerequisite for developing competence. He went on to suggest that overall intellectual ability should be excluded from assessments and that only the required specialised knowledge for those competencies should be

considered. Indeed, McClelland (1973) agreed, argued strongly that intelligence is not necessarily a measure of success whereas ability to meet specific, contextual competencies is a far better indicator of performance, when carrying out a specified role. However, Teodorescu (2006) argued that unclear understanding of what competencies are and the term's frequent, interchangeable use with competence in everyday language, makes for a confusing situation. The drive to find a definition for competence which reconciles various perspectives has further blurred its distinction with competency (Cowan et al, 2007; Le Deist and Winterton, 2005).

In establishing competencies there is a clear need to differentiate the terms for both the organisation and the individual to understand what is required of them both to be considered competent in role (Woodruffe, 1993). Once again, the context of where and when they are being used infiltrates into understanding leading Woodruffe (1993 p.29) to define competencies as:

"…the set of behaviour patterns that the incumbent needs to bring to a position in order to perform its tasks and functions with competence."

If competence is seen as the overarching concept, competencies can be considered as the constituent parts (Teodorescu, 2006; Velde, 1999; Eraut, 1998; McClelland, 1998). It is how these elements interact to form wider competence which remains the subject of ongoing debate. Indeed,

distinction between them as separate concepts but knowledge of their interaction to form a wider understanding has teaching, practice, and regulatory implications (Moghabghub et al, 2018). A tenet of this is the role that knowledge and skills play. Fernandez et al (2012) noted there is widespread acknowledgement of the function of knowledge and skills as competencies. As such they feature as key parts of various models. Dreyfus (2004) considered skill acquisition as the movement from novice through competence to expert. With competence as the third point of this 5-stage, linear process[9], he argued that use of experience enabled the practitioner to move towards expertise. The use of experience allows the individual to move beyond a rules-based approach, to make judgments to push the boundaries of that skill and how it is then applied. Benner (2001) applied this model to nursing competence.

However, Woodruffe (1993) describes competencies as a set of behaviours clearly distinct from the technical skills required for a role or job. He concluded that labelling technical skills as competencies further muddles the situation. Instead, he considered competencies to be the attributes individuals bring to the role in its entirety. This is later echoed by Campion et al (2011) who separated technical abilities from leadership attributes in their approach to competency modelling. Based on this perspective, one may well be competent in carrying out a technical aspect of their role but not necessarily competent when considering their wider role. This presents

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[9] Novice, advanced beginner, competence, proficiency, expertise (Dreyfus, 2004).

the danger of competence being represented only in functional terms, meaning competence is based on the ability to perform specific tasks or role elements, without necessarily being able to adapt to change or deal with complex situations. Hager and Gonzci (1996) criticised the task based, functional approach as lacking definition, its failure to consider wider behavioural and contextual aspects and its inability to show predictive value over traditional testing. They went on to argue that to take such a task orientated approach to competence fails to address dealing with emerging challenges or reaction to contingency. In doing so, it does not consider higher level functions such as motivation or emotion within the broad remit of competence. This task-based deals only with discrete elements associated with task completion and fails to view competence as a holistic process. As such it risks competence being viewed as reductionist behaviourism without understanding of the complex requirements necessary for successful function within a specific role or environment.

Consequently, defining individual competencies should be included within a broader contextual definition of competence (Eraut, 1998). Lester et al (2018) went further suggesting that competency modelling should be based on an accepted description of practice in the required field of practice. They propose that there is limited value in inclusion of knowledge and skills as they often quickly date and can be both unwieldy and restrictive in enabling achievement of competence.

Although there appears to be some blurring between skills and competency, Rychen and Salganik (2000) identify that there is a tangible conceptual difference between the two which should be considered when constructing an approach to competence. Spencer and Spencer (1993) argued that competencies are underlying characteristics of competence framed by specific contextual and causal criteria. They went on to identify five features of competency: motives, traits, self-concept, knowledge, and skill. These were framed with knowledge and skill being the external superficial features which employers could see. Whereas motives, traits and self-concept to deeper characteristics which drive the individual to achieve. They viewed development of competence models on successful blending of these categorised components to deliver performance.

Spencer and Spencer (1993) distinguished competencies with levels of performance. '*Threshold'* competencies are those characteristics essential for minimal effective performance. They do not distinguish between superior and average performers and relate to the knowledge and skills required for role. In contrast, *'differentiating'* competencies such as higher-level goal setting, motivation, interpersonal and political skills, set superior performers apart from the average. Once again context is identified as key, with Spencer and Spencer (1993) citing competencies should be driven by the requirements of workplace performance. These should form the template for competency setting and constructing a competence model for

the setting. Spencer and Spencer (1993) argued that failure apply this accepts mediocrity and reinforcement of average performance.

3.2.3 Competence Models

Listing competencies alone does not adequately support development of contextual competence and risks competence seen in functional terms alone. For a coherent conceptualisation of their relationship, a well-articulated model enables the organisation to define what is required and the individual to meet those expectations (Lillevalli and Taks, 2017; Bartram, 2005). The idea of considering competence as a multi-aspect construct or model is not new. Some 300 years BCE, in his ethical philosophies, Aristotle broke behaviours and virtues into domains. Indeed, his intellectual virtue is comprised of five distinct elements: artistry/craftsmanship, practical wisdom, understanding/intuition, scientific knowledge and philosophical wisdom. With time and experience, one can masterfully blend practical ability with scientific reasoning and communication of thought with others to make quantitative decisions (Kraut, 2022).

Models require the competencies to make sense and define the nature of the activities. However, there is a balance to be sought when developing such an approach. Bartrum (2005) argued that models need to reconcile generalisation, which fails to capture specific, observable, and measurable

behaviours, with being so distinct that core behaviours are not transferable. To aid this, a blend of personality and performance-based criteria can assist in defining the competence model for that setting. This requires the model to be clearly defined, aligned with the organisational purpose, and constructed of competencies consisting of behaviour and performance criteria in equal measure (Lillevalli and Taks, 2017).

The use of competencies can be viewed across several approaches. However, the nomenclature around competencies and domains is less clear. Analysis and mapping across performance models from business and industry led to Bartrum's (2005) identification of the 'great eight' competencies. This approach sought to distinguish the attributes used by personnel in practice but, retain enough generality to be used across a range of settings. Spencer and Spencer (1993) discuss domains consisting of behavioural characteristics under which specific competencies are then identified. They used these to form what they termed as their *'competency dictionary'* (p.19). The evidence in the literature and consensus amongst the participants was that competencies fall under the broader umbrella of domains. This enables grouping of consistent competency sets to be identified and refined for contextual use. Indeed, this approach is applied by the National Health Service (DH, 2004) which uses the knowledge and skills framework (KSF) to inform both job descriptions and, in the USA, the National Association of Colleges and Employers (NACE, 2021) which identified general competencies for graduates moving into employment,

regardless of industry or sector. Table 3. outlines the domains identified by each organisation/author. The Spencer and Spencer (1993) and the NACE (2021) approaches are designed in general terms. Although written specifically for application in the NHS, the KSF was designed for use in a broad range of employee groups and therefore required transferable language. To enable application to non-clinical groups, the technical skills required of clinicians has been removed from the core domains for NHS staff, thus evidencing the approach suggested by both Woodruffe (1993) and Campion (2011). The use of domains is equally apparent in the clinical setting.

Table 3. Non-technical Competency Domains.

National Association of Colleges and Employers	Bartrum	National Health Service (Department of Health)	Spencer and Spencer
Professional Competencies	Great Eight Competencies	Knowledge and Skills Framework	Competency Dictionary
2021	2005	2004	1993
Critical Thinking	Leading and deciding	Communication	Action and Achievement
Professionalism	Supporting and developing	Personal and People Development	Impact and Influence
Communication	Interacting and presenting	Health, Safety and Security	Cognitive

Teamwork	Analysing and interpreting	Service Improvement	Helping and Human Service
Technology and Data	Creating and conceptualising	Quality	Managerial
Leadership	Organising and executing	Equality and Diversity	Personal Effectiveness
Inclusion	Adapting and coping	Plus, additional specific knowledge and skills dimensions	
Career Development	Enterprising and performance		

Exploration of the language clearly demonstrates common ground between each conceptual approach. Communication skills for example are identified in all four models and supported by an array of contextual competencies and characteristics. The use of domains enables a bridge between competence as a concept and the organisational competency requirements but, as Wasselink and Wals (2011) argued, the devil is in the detail. The strength of competency use is in both the context and embedding in the organisational fabric. The application of overarching domains without the necessary supporting information, and contextual detail diminishes their use. Successful identification of predominant domains and their characteristics, enables competence to play an active part in not just effective role performance, but a wider innovative and reflexive organisational culture.

The language around competence, its competency domains, and the constituent competencies, is driven by context and the requirements of both

the user and the organisations. To explore and compare qualitative data, mapping is a useful tool to identify commonalities and explore the relationship between different approaches (Noyes, et al 2021). Table 4 outlines some examples mapping the individual model competencies to the six domains established by Spencer and Spencer (1993). The table shows whilst the descriptions differ between models, the characteristics of each can be mapped to the six core domains. Whilst these are transferable components in the broadest sense, the contextual requirements of each are set by the environment or situation in which they are being used. Eraut (1998) elaborates stating that changing the conditions, changes the definition of competence and thereby the associated competencies.

Table 4. Mapping of model competency examples to core domains.

		NACE	Bartram	NHS KSF	Spencer and Spencer
		2021	2005	2004	1993
Domain	**Achievement and action.**	Awareness of own strengths and areas for development. Develop plans and goals for career.	Achieving personal work goals and objectives. Entrepreneurial and commercial thinking.	Develop oneself and others in area of practice.	Achievement, orientation, concern for order, quality & accuracy initiative, information seeking.
	Impact and influence	Understand importance of a range of	Relating and networking. Persuading and	Develop and maintain communicatio	organisational awareness,

		communication means. Frame communication appropriately to audience.	influencing. Presenting and communicating information.	n with people on a range of matters.	relationship building.
	Cognitive	Decision making and problem solving with sound reasoning. Summarise and interpret data. Multi-task in a fast-paced environment.	Learning and researching. Creating and innovating. Formulating strategies and concepts. Writing and reporting. Applying expertise and technology. Analysing.	Promote monitor and maintain best practice. Maintain quality in one's own practice	analytical thinking, conceptual thinking, technical/professional/managerial expertise.
	Helping and human service	Contribute to inclusive work processes. Keep an open mind to diverse ideas and new ways of working.	Working with people. Adhering to principles and values.	Promote a culture that promotes equality and values diversity.	Interpersonal understanding, customer service orientation.
	Managerial	Listen carefully to others. Employ personal strengths to	Deciding and initiating action. Leading and supervising.	Work in partnership with others to develop, take	developing others, directiveness/assertiveness and use of position,

	manage conflict. Collaborate with others achieve common goals.	Planning and organising. Delivering results.	forward and evaluate direction, policies and strategies.	teamwork and cooperation, team leader.
Personal effectiveness	Seek and embrace development opportunities. Professionally advocate for self.	Adapting and coping with change. Coping with pressure and setbacks.	Contribute to improvement in practice.	self-control self-confident flexible organisational commitment

The experiential and knowledgeable application of competencies to meet domain specific requirements enables the individual to transition from what Spencer and Spencer (1993) described as threshold competence, to a more complete contextual competence. The nature and complexity of the competencies within domains is set by organisational requirements and used to reflect roles being played. As the number of domains and the associated competencies become more complicated, a greater degree of applied understanding, associated skills, and corresponding experience is required to enable successful application. Each domain can reflect technical skills or non-technical components depending in what is required.

The use of competencies alone to form models though, has associated risks. Many competency statements are often not linked to the daily work of those they are intended for and are so subjective they are not realistically

measurable resulting in a wide variance of performance within a single organisation (Teodorescu, 2006). Cheetham and Chivers (1998) concluded that whilst competence models offer insights, there were none that were fully comprehensive or transferable. Indeed, they go on to note that success is based on how the practitioner uses their personal traits to combine the domains in achieving competence. Furthermore, personality influence on the application of competencies in achieving the required competence cannot be understated. Hogan and Holland (2003) inferred that it was personality which made the difference between 'getting on' and 'getting ahead'. A modelled approach risks the omission of mental processes or personal idiosyncrasies which assist an individual in achieving success, as these elements are difficult to define, consistently apply and objectively assess. Langdon and Marelli (2002) further argued that competency frameworks are often flawed as they do not reflect the contemporary requirements of the job, consist of arbitrarily selected statements based on the experiences of the few involved in their development and frequently do not use what they termed *'the language of work'* (p.19). They argued that defining competence was based on understanding six key elements: inputs, conditions, process steps, outputs, consequences, and feedback. Combining this to understand the performance outcomes enables a structured approach to competency identification. Effectively standing as domains, their competency sources are behaviour attributes, standards, support, and human relations. Professional standards create a contextual language of work. Shared

understanding of what is required in the competencies and a clear means of development and acquisition can aid in the consistent application of competencies and aid in personnel buy-in across a variety of settings (Vazirani, 2010).

Competence, in contrast to commonly held views of intelligence, is widely considered learnable and, as such can improve with deliberate action, exposure and experience (Blomeke et al, 2015; Weinert, 2001; Benner, 2001). This idea is supported by Hattingh (2014) who describes three aspects of 'applied' competence outlined in Table 5:

Table 5. Aspects of Applied Competence (Hattingh, 2014).

Aspect	Description
Practical	The ability to perform specified tasks in context. This is comparable to the threshold level identified by Spencer and Spencer (1993).
Foundational	Understanding the skills and why it is being applied. This accounts for the intellectual and academic knowledge used in the application of the skill.
Reflexive	Relates to the ability to integrate and connect the skill performance in a way that enables learning from the actions and adaptation to changes in situation. Additionally, those competent to this level

	can explain adaptions and autonomously develop their understanding.

Presenting applied competence in these terms, Hattingh (2014) argues that learners can develop understanding of integrated concepts underpinning competency and apply them in real world situations. The experiential element enables users to progress through the journey from practical application of specific skills to a reflexive understanding which in turn leads to development not just of the self but the roles being played within the organisation. Hattingh's (2014) approach mirrors use of application of experience and understanding in the movement from individual skill acquisition to competence a broader use of domains within the wider notion of competence. Although relating to competence in the STEM settings, Lerche et al (2022) also identified that competence related to contextual experience of a role. Competence grows with experience but is then aligned with an increased demand on the individual. The perceptions of one's own competence levels were directly linked to the tasks at hand; personal views of competence were viewed as higher with more manageable tasks and lower when they were more formidable.

3.2.4 Competence Measurement

Schneider (2019) argued that the lack in conceptual clarity makes understanding competence and therefore a process of measurement

impossible. This creates something of a paradox: on one hand broad competence, especially in areas such as NTC, is challenging to objectively measure and on the other, many organisations require workers, particularly within the healthcare sector, to be assessed as competent.

Lindgren et al (2004 p.436) discussed the process of 'competence management' involving a series of actions including, identifying the competence needs, finding any gaps between the required and actual competence, development of appropriate competencies and adequate resourcing to ensure they can be applied. They went on to note there is a requirement to develop an approach to competence assurance with organisational success or failure dependent on robust processes. This is supported by Peach et al (2016) who argued that competence management has considerable impacts on performance, workforce planning, recruitment, and creation of valid learning outcomes for employees. By developing a process to identify and measure competence they went onto note that a more efficient system is created which reduces time taken for work and reduces the occurrence of human error.

When considering the competence needs of an organisation or role, there are multiple factors to be considered, not least of which is establishing a starting point, identifying the competences required and a means by with they can be objectively measured (Lester, 2017; Flin et al, 2008). Table 6

demonstrates the Spencer and Spencer (1993) and Hattingh (2014)

approaches to the development of assessment criteria.

Each of these approaches are iterative allowing the designer to test and

adjust at each stage, going to previous steps if required. Hattingh (2014)

argued that integrated assessment of competence not only ensures

integration of concepts and ideas with the workplace but provides a context

specific means to assess competence of personnel.

Table 6. Competence Conduct Design.

Spencer and Spencer (1993) Classic competency study design	Hattingh (2014) Integrated assessment design
Identify performance effectiveness criteria	Preparation – understand what is needed for integrated assessment
Identify criterion samples for both average and superior performance.	Identify program objectives and learning outcomes.
Collect data – observation, staff canvassing, outcome requirements.	Design the integrated assessments – structure, embed knowledge and understanding is the assessment process.
Identify job and competency requirements.	Develop outcomes and assessment matrix.

Validate the competency model	
Apply to setting including appropriate training professional development and performance management.	

Both approaches discern higher level performance with nomenclature that reflects more advanced levels of competence. Once the competence requirements and levels have been identified, there is a need to develop a means by which they can be measured. Whilst this may be straight forward in the case of some technical skills, the subjective nature of NTC makes this a complicated process.

The challenges associated with measuring aspects of NTC are mirrored in the difficulties associated with measuring human factors. In their systematic review on measuring maintenance human factors, Peach and Visser (2020) argued for the need for a consistent approach in which trends are more important that single assessments. In doing so, a more in-depth assessment of both the work systems and the individual workers can be made over a period of time. Their review of information from the engineering sector identified multiple aspects of human behaviour associated with specific roles within a system. However, they identified little consensus in how to measure outcomes objectively and those they did were defined as cumbersome. A key aspect of this difficulty lays in the

contextual element of competence. Kantowitz (1992) argues that measurement scales are required to be both reliable and valid to consistently measure what is required. Therefore, measurement processes must identify the subjects to be measured, the variables being observed and the setting in which they are being used. With measurements developed against the backdrop of each aspect, this triumvirate enables a comprehensive approach to be developed specific to the environment. Katowitz (1992), went onto note that due care needs to be applied in the development of such assurance processes and that construction of a poorly developed tool can be more detrimental than having no assessment at all. The outcomes of these approaches demonstrate the requirement for the conduct of NTC measurement to be set in the contextual requirements of systems in which it is being used. Interestingly, Spencer and Spencer (1993) advocate a grounded theory approach to this aspect of competence conduct as it enables thematic analysis and coding to identify competencies and measurement processes in an area where there is likely to be a shortage of relevant information.

3.2.5 Non-Technical Competencies and Human Factors

Despite the increasing reliability of technology across all sectors, the human element remains central to delivering a wide range of functions not least of which is nursing. In understanding mishaps in practice, Reason (2000) surmised there were two approaches to the human element. The

first, a person-based approach, remains largely dominant within several institutions and is based on unsafe practice being based in variability of human behaviour. The second, a systematic approach, views failure as a series of events which align to result in error as represented by the 'Swiss Cheese' model. In the latter, unsafe acts are a combination of active failures and latent conditions. At the centre of both approaches are human behaviours. Driven by safety and the need to reduce adverse events, the concept of human factors was born. Although originating in the aviation industry, they have been increasingly applied across a range of workplaces, reflecting a consistency in human behaviour regardless of the environment (Flin et al, 2008). In their evaluation of serious events ranging from nuclear disasters to military incidents and healthcare events, Flin et al (2008) identified multiple human behaviours which led to significant events. Several of these ultimately leading to loss of life. In doing so, they demonstrated a relationship between non-technical competencies and human error. They concluded that application of positive non-technical skills resulted in reduced likelihood of mistakes and subsequent adverse events.

Much like the broader discussion on competence, inconsistent use of language adds to the challenge in understanding the non-technical components. Within an engineering context, Teichnann and Rüütmann (2013) concluded interchangeable use of terms such as 'soft skills', 'non-technical competences' or 'non-technical skills' frequently reflected the

merging of several concepts. However, they also found that there was a tacit understanding based around the bipolar view of the presence of soft or non-technical skills needing to be balanced with hard or technical skills. The former relating to social or person-centred competencies and the latter associated with the knowledge and skills directly required for a physical function such as carrying out a procedure.

It is common for approaches to competence to break competency requirements into broader domains. Bartrum (2005) viewed competencies as behavioural sets which enabled achievement of organisational goals or outcomes. Although not specifically citing these as domains, he saw each of these as being made of component competencies which are the building blocks upon which competence is based. Within the aviation industry these competencies have become widely known as human factors – another term which when added to the existing mix, adds further confusion. Indeed, even with use of a singular term, there seems to be geographical and contextual variations in interpretation, which has seen little resolution despite attempts for a coherent and consistent terminology (Parts et al, 2013).

As an established discipline in understanding behavioural influences on outcomes, human factors centres on three core aspects: cognitive skills, interpersonal skills, and personal resources (Nacul et al, 2020; Flin, 2013). Earlier work by Flin and Moran (2004) concluded that these aspects are driven by individual characteristics such as attitudes, motivation and

personality echoing some of the points already discussed around the wider competence concept. Successful blending with group processes such as communication and co-operation in turn leads to improved quality and safety outcomes rooted in improved personal and team performance. Flin et al (2008) developed the seven human factor skills which they mapped to non-technical domains (Table 2). Much of this work by Flin focuses on the teamwork functions and the role of competence requirements of the individual within that team. Consequently, it has been well applied to teams within aviation and there has been some transference to other professional arenas (Biede et al, 2023).

Other discussions of non-technical skills broadly align with this approach but have their own drivers often driven by context or perceptions of how the skills affect the required outcomes (table 7). Sharma and Kim (2021) take a more cognitive centric approach where problem-solving and critical analysis skills are supported by additional social skills such as establishing team trust, negotiation, and cultural awareness. In the military aviation environment, Tsifetakis and Kontogiannis (2017) found from the literature that non-technical skills were either contextual or supporting to mission essential competencies. They argued that the significant overlap and differing terminology between each of these subheadings created confusion and would frequently merge.

Table 7. Core aspects and non-technical competencies within Human

Factors.

Core Non-technical Domain	Human Factor/Non-Technical Competency
Cognitive	Situational Awareness
	Decision Making
Interpersonal	Communication
	Teamwork
	Leadership
Personal	Coping with Fatigue
	Managing Stress

Work on human factors has increased the safety and revolutionised training

within the aviation industry. Articulation of elements of human behaviour to

improve team performance and outcomes is central to this approach (Flin,

2008). Based on this approach, the Royal College of Surgeons of

Edinburgh (2012) cite 5 non-clinical elements (situational awareness,

decision making, communication, teamwork, and leadership) all of which

are necessary to maximise the safe and effective management of patients.

Whilst the inclusion of non-technical elements such as those established by

these authors in competence assessment is likely to support patient safety,

it can also create some confusion. Human factors are frequently applied to

team function within a specific setting such as air travel or operating

theatres. However, application to individual function or how these are utilised in wider settings seems to be less well articulated. Furthermore, Peddle et al (2018) argued the volume of different terms, definitions and requirements, may actually result in safe practice being undermined.

3.3 Part 2: Professional Aspects of Competence

Having established understanding of competence, models, some of the applied nomenclature, there is a need to explore these from a professional perspective. This part of the literature review will consider the wider nursing issues before closer focus on the British military nurses.

3.3.1 Nursing Context

Defining nursing presents multiple challenges in striking a balance between generality and specialist or advanced roles which then translate to the associated understanding of competence. The International Council of Nursing (ICN, 2002) provide a very broad definition which can be applied to a range of clinical and geographical settings. This perspective is based on provision of collaborative care delivered autonomously in a range of health settings. This is supported by health protection and promotion, advocacy for patients, supporting education and developing health policy to meet patient needs. This wide definition of nursing identifies core components of enabling a general interpretation for application across multiple countries

and healthcare systems. However, its generality does not necessarily give the granularity to encompass specialist or advanced roles and the development of care based on therapeutic and investigative advancements. Furthermore, the lack of specifics can result in variances of interpretation without consideration of the wider standing of nursing within a given healthcare system. For example, the way nursing is professionally respected, utilised and the influence on healthcare delivery is very different between the UK and countries such as Pakistan (Lamb et al, 2020). This limits the value in what is now an ageing definition.

The Royal College of Nursing (RCN, 2023) seek to address these issues by providing a definition within the UK context, describing nursing as:

"… a safety critical profession founded on four pillars: clinical practice, education, research, and leadership." (p1.)

They seek to identify nursing as the ability to provide highly skilled, individualised care based using the Nursing Process (assess, plan, implement, evaluate). There is additional focus through a collection of 8 principles on the role compassionate leadership, evidence-based care, and communication skills play in the development and delivery of nursing. Hill (2023) comments that the new definition reflects the technological and role developments nursing has seen in the twenty years since publication of the ICN perspective in 2002. Interestingly, the notion of competence has little

focus in either view. The RCN document only mentions competence twice: in relation to cultural awareness and working within GDPR guidance. Whilst there is clear linkage to the NMC Code (2018a) and the implication of being fit for practice, competence is neither defined, discussed, or used within the document to understand the requirements of nurses.

Price-Dowd (2017) argued that competent nurses are central to ensuring that patients are cared for when they are in need. In seeking healthcare, patients look to professionals for the compassion and expertise to competently meet their needs. Increasing complexities in the healthcare setting, the need for patient safety and the politicisation of health delivery, demands a means by which competence in nursing can be evaluated and assured. However, reflecting wider competence literature, nurse competence is a nebulous concept with inconsistent nomenclature and taxonomy which has led to a lack in understanding (Bradshaw and Merriman, 2008; Watson et al, 2002). Peplau's (1988) approach based on science and art encapsulates the challenges in providing a definition for nursing and any associated statement for competence. She argues that nurse competence cannot be reduced to having only skills or scientific knowledge. There is a need to capture the humanistic element of nursing, and this challenges the order of measuring nurse competence through the completion of a series of tasks. This is further echoed by Calman (2006) who explored patient perceptions of nursing competence. She found that patients were less focused on the practical skill delivery, trusting that

nurses were deemed to be competent by the setting and the regulatory

process. Instead, their judgement of competence was based on the patient

interpersonal or 'human' skills. She does however, go on to note that

patient experience alone cannot be used to guide understanding or

assessment of nursing competence. This is down to patients only having

part of the picture, frequently lacking the clinical technical understanding to

give a full insight into their treatment.

Contrastingly, in her model for clinical nursing practice, Benner (2001) used

the Dreyfus (2004) approach to skill acquisition in exploration of

experience-based nurse competence. This five-stage process of skill

acquisition sees individuals progressing with experience from novice to a

state of expert[10]. In defining experience as more than the simple passage

of time or longevity in a setting, Benner argued that experience is

developed through multiple encounters and continued exposure to

situations. This in turn leads to refinement of ideas which ultimately results

in expertise, enabling nurses to challenge the rules-based approach

associated with the novice end of the spectrum. Nurses at the expert end

use past experienced situations as paradigms enabling vision of the entire

situation. This allows irrelevant and wasteful possibilities to be discarded,

ideas to be developed and care based on their established understanding

of dealing with complex scenarios. Congruent with wider competence

literature, Benner also identified domains as the basis for nursing practice:

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[10] Novice, advanced beginner, competence, proficiency, expertise.

1.   The helping role.

2.   The teaching and coaching function.

3.   Diagnostic and patient monitoring function.

4.   Effective management of rapidly changing situations.

5.   Administration and monitoring of therapeutic regimens.

6.   Monitoring and ensuring the quality of healthcare practices.

7.   Organisational and work role competencies.

Benner (2001) scaled each of these noting that nurses work through the novice to expert scale in each field with it being impossible to be an expert in all fields, at all times. This is echoed by Julnes et al (2022) who argued that as nurse leaders felt it impossible to be skilled in all aspects of their roles, they struggled with the concept of professional competence and identifying means by which all aspects could be met. Whilst one may prove to be an expert in the diagnostic or patient monitoring function, they may only be at the novice stage for assessing quality of practices. Likewise, this applies to individual skills within each of those domains. Despite this

approach, Smith (2012) argued that Benner still fails to capture what nursing competence is. The idea of competence growth associated with experience is strongly supported in the literature but wider factors to gaining that experience suggests that it is not a staged or linear process (Takase, 2012; Chang et al, 2011). Professional role, client load, treatment methods or environment are likely to have significant influence on the experiences of nurses. Takase (2012) argued that the correlation between experience and nursing better suits a curved growth model where competence rapidly increased in the first ten years but stabilises in subsequent periods. During the early period, not only do nurses learn from their own experience, but they continue to learn from the experiences of others. The later consolidation period does not result in ceasing to learn but rather, use of repeated performance to refine their reactions to new situations and nurture their nursing competence.

In line with their civilian counterparts, British military nurses are required to maintain professional standards which includes ensuring they are fit for the role they play (NMC, 2018a; MOD, 2020). This is supported legislatively by the requirement for organisations to ensure their healthcare workforce not only holds the required level of competence but has adequate opportunities and robust processes in place to maintain it (CQC 2020; UK Gov, 2014). As one of their 6 C's[11], NHS England consider competence as having the expertise, clinical and technical knowledge to be able to deliver research-

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[11] Care, compassion, competence, communication, courage, commitment (DH, 2010).

based treatment and care (DH, 2013). This patient-focused description does not necessarily cater for the nuances and complications associated with wider team working and non-technical skills to develop the environment in which it is being delivered. Price-Dowd (2017) also observed that the challenge in identifying competence in nursing originates in the difficulty reconciling the art and science elements. Votnoy et al (2020) went on to argue that the abstract and diverse nature of nursing contributes to the difficulties in defining what it is and therefore what competence is expected to look like. Despite the challenges with defining nursing competence, across the literature, it is universally accepted as being more than the collection of tasks. Indeed, echoing the wider literature, competence is a concept based on the successful, contextual application of nursing skills for the situation in which the nurse finds themselves (Valizadeh et al, 2019; Bowling et al, 2018; Schofield et al, 2018; Fukada, 2018; Lakanmaa et al, 2012).

The importance of the regulatory requirements and organisational oversight for competence and compliance for the healthcare setting was reinforced by the Francis Report (Mid Staffs NHS Trust, 2013). Although focused on competence in leadership and management, the report highlighted the effects of serious suffering and harm to patients when both technical and non-technical competence is not present. In regulatory terms, competence requirements for nursing are set out by the Nursing and Midwifery Council (NMC) and managed through two key documents: *'The Code'* (2018a) and

'Standards for Competence for Registered Nurses' (2018b). The first of these sets out the regulatory standard for nurses to maintain their competence but overwhelmingly reinforces the requirement for nurses not to work outside of their scope of practice. Indeed, the primary driver of this document circles around patient safety and trust, ensuring nurses' practice does not exceed their level of knowledge or skill. The second places more focus on the development of competence within 4 spheres[12]. Although addressing aspects of non-technical competence, this document provides minimal clarity on each aspect with many areas overlapping. Furthermore, there is no definition provided with only rudimentary guidance for nurses on what is required of their competence. The difficulties in defining competence as a concept appear to be transferable to the nursing world. Once again, the conceptual use of competence within nursing is to avoid adverse incidents, an idea reinforced by the RCN (2023) viewing nursing as a safety-based profession.

3.3.2 The Military Nursing Context

The story of military nursing is rich, with a long history of helping patients around the world. Discussion of nursing often conjures romantic images such as those of Florence Nightingale walking the wards with her lamp in the Crimea. However, these notions belie the complexities of the role she

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[12] 1. professional values, 2. communication and interpersonal skills, 3. nursing practice and decision making, 4. leadership, management and team working.

was playing, the conditions in which she was working and the long-lasting

effect it has had on the profession. Her work kick-started the idea of nurses

being competent for the role. The early focus on infection prevention and

control and use of that knowledge to prevent deterioration in patients has

had a long-lasting effect on delivery of nursing (Breigeiron, 2021; Hegge,

2011). Ensuring nurses recognised the importance of cleanliness and

hygiene in patient management is a competence that remains today. Currie

and Carr-Hill (2012) noted that since those days, nursing has evolved on an

unprecedented scale. The same can be said for nursing within the armed

forces. Like Florence Nightingale, modern military nurses deliver care close

to the front lines in a wide range of arenas around the world. Recent British

Military deployments typify the diverse demands made of military nursing

personnel. Not only does nursing make a significant contribution to both the

physical and moral components of fighting power[13] but has a significant

reputational impact on how the UK is seen by international partners (British

Army, 2017; MoD, 2014).

Combat operations have long been the mainstay of military nursing,

deploying to a wide array of warzones throughout history to treat those

injured in conflict. The role of military healthcare during war is governed by

the Geneva Conventions – particularly parts 3 and 4 (ICRC, 1949). In more

recent times the role played by military nursing has become more diverse

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[13] Conceptually fighting power consists of three components; moral (the will to fight), conceptual (the thought processes such as strategy), and physical (the means) (MOD, 2023).

with increasing support to peacekeeping missions or humanitarian and disaster relief operations (HADRO). Much of the guidance for the use of militaries in disaster relief is generated by the United Nations Office for the Co-ordination of Humanitarian Affairs (UN OCHA). In producing consensus-driven, international guidance the UN OCHA published 3 key papers supporting civil-military relations (CMR) in humanitarian operations: IASC Reference Paper: Civil-Military Relationship in Complex Emergencies (IASC, 2004), The Use of Military and Civil Defence Assets to Support United Nations Humanitarian Activities in Complex Emergencies (Revised 2006) and the Oslo Guidelines (2007). Boland et al (2021) noted a plethora of available literature from an array of both state and non-government organisations but referred to these three UN OCHA policies as *'guiding documents'*. Simm (2019) highlighted the growing need for military involvement and guidance as climate related disasters become more frequent, intense, and severe.

Following the closure of dedicated UK military hospitals in the late 1990's, all acute secondary care for military personnel shifted to being provided by the NHS. Consequently, military nursing personnel were moved into the civilian setting. Although movement to the NHS enabled exposure to a range of clinical presentations and complex cases, not seen in military hospitals, British military nurses reported that the patient demographic, nature of illness and injury and infrequency of major incidents failed to adequately prepare them for the rigors of deployment (Finnegan et al,

2016). Furthermore, this was exacerbated by having to reconcile the corporate and clinical priorities of the NHS with the military requirement to prepare clinically for operations overseas (Finnegan et al, 2016; Beaumont and Allen, 2012). The frustration of feeling unprepared by the clinical environment and the requirement to balance the wants of two masters, who frequently have competing demands, further adds to the feeling of duality described by Agazio (2010).

The NHS support their staff to understand role requirements through application of the Agenda for Change Knowledge and Skills Framework – NHS KSF (DoH, 2004; NHS Employers, 2018). As discussed earlier, this is formed of 6 central dimensions (personal and people development, health, safety and security, service improvement, quality and equality and diversity) and additional elements specific to job role (such as health and well-being for nurses), it forms the backbone of job descriptions and competence requirements for non-medical NHS staff. Francis (Mid Staffs NHS Trust, 2013) noted that each domain within the NHS KSF is unexceptional in the scheme of nursing competence. The report advocated a flexible approach to the array of nursing tasks and the development of leadership to support the nursing role in delivering dignified patient care. In doing so, competent leadership can prioritise and drive safe and effective care. This is achieved by the nurturing of a teamwork culture which values the collective achievement in care delivery. Within the military setting, assurance of competence is further supported by the Defence Operational Nursing

Competence (DONC) framework (MOD, 2010). This document aids in assuring the clinical aspects of the role to ensure that nurses have the required clinical technical skills prior to deployment on operations. Consequently, it goes some way towards meeting the organisational requirement to ensure nurses are competent for role. However, there is little discussion of the non-technical competence within this military document. Competence domains such as leadership and communication have long been the mainstay of military institutions such as the Royal Military Academy Sandhurst of the Defence Academy, Shrivenham. Concepts such as mission command[14] are core ideas within the military setting. There is though, scant information in the DONC or current literature on how this can be developed, assessed, or used by British military nurses within the clinical setting. This presents the risk of military nurses being viewed as competent for deployment based on their technical competence alone.

This approach highlights the changing contextual challenges for military nurses. The movement between the NHS and the operational setting creates a changing state of what is 'normal'.

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[14] Focus on achievement of intent, promoting decentralised command and freedom of action based on trust and mutual understanding between leaders and subordinates (British Army, 2021).

3.3.3 Military Nurse Non-Technical Competence

In general terms, non-technical competence is considered part of the wider military role. Instead of inclusion within a specific nursing framework or job descriptions, non-technical aspects of the officer and soldier roles are incorporated in annual performance reporting. Joint Service Policy (JSP) 757 (MOD, 2023) mandates the process by which personnel appraisals are undertaken across the military. This is based on a set process with specific timelines for elements of the assessment to be undertaken. It consists of a narrative review of the subject's performance over a 12-month period, carried out by two reporting officers. Table 8 outlines the performance attributes supporting the narrative with associated components. These are scored by the reporting officers on a scale (A+ to D, with B defined as performing to the standard expected in all respects). Although these attributes have some common features with nursing, they have been written for application to all military officers regardless of employment group, speciality, or environment. Each attribute is accompanied by a series of positive and negative statements to aid reporting officers, but no framework or objective assessment guidance is provided. The universal approach to all officers across the armed services ensures the same process is applied to military career reporting. However, there is little specific direction or contextual information to aid in trade specific reporting. Statements are generic, have no identified research supporting their

development and there is no supporting framework provided to guide personnel in their application to reporting.

Table 8. Military officer performance attributes for annual reporting[15]

Attribute	Definition	Components
Adaptability and initiative	Learns and changes behaviour to suit different or demanding circumstances, responding effectively to the environment.	Learning and development
		Innovation and initiative
		Flexibility
		Effective Intelligence
Awareness and understanding	Comprehends the structures, interactions, ways of working and cultures throughout the Whole Force, across departments, and multinational environments as appropriate	Organisational awareness and understanding
		Cultural awareness and understanding
Breadth of perspective	Considers the implications, both at a	Forward thinking
		Thinking strategically

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[15] JSP757 Annex A to Chapter 5 (MOD, 2023)

	strategic and local level, of actions and decisions whilst appreciating the broader context.	
Communication and influence	Transfers thoughts and ideas, listening to and engaging others to gain the necessary support and commitment to build networks and achieve outcomes.	Communication
		Influence and challenge
		Engaging others
Delivering Results	Demonstrates accountability to achieve objectives, managing resources and information appropriately to meet demands; reviewing priorities as required.	Resource management
		Accountability
		Achieving results
		Security, information management and assurance.
Leadership	Role models the service behaviours and leadership code, providing credible and competent example. Sets and communicates clear objectives motivating	Building capability
		Leading by example
		Handing ambiguity
		Subordinate development
		Emotional intelligence

	and, where applicable, managing and developing others.	
Physical and mental resilience	Manages physical and mental fitness to maintain well-being, physical readiness and focus to respond positively to Service life and stressful or challenging behaviours.	Physical resilience
		Mental resilience
Problem solving and decision making	Positively seeks information to inform effective problem solving, enabling timely and sound decisions with appropriate management of risk.	Information seeking
		Problem solving
		Risk management
		Decision making
Teamwork and collaboration	Builds relationships and team cohesion to enable collaborative working to achieve organisational outcomes.	Working together
		Relationship building
Values and standards	Lives by the Values and Standards of own Service, upholding these in challenging or ambiguous circumstances.	

In addition to the reporting process, military nurses are required to have a job specification as set out in JSP 755[16]. These are on a set format utilised across all three services for all personnel, regardless of their professional group. When being written, brevity in the specifications is expected with only space for 8 statements (limited to a maximum of 150 characters) to record roles and responsibilities. However, the use of generic statements and standardised competencies in both appraisals and job descriptions makes them far less applicable in the professional setting (Wesselink and Wals, 2011; Langdon and Marelli, 2002). The resulting variance in performance measurement offers little to support a meaningful, consistent approach and diminishes trust of the subjects in the process (Teodorescu, 2006).

Search of the literature, based on the original systematic review and applying the search strategy (section 3.1.2), revealed several papers exploring the NTC requirements for military nurses. However, only 2 were the result of primary research. The first was a US Delphi study carried out by Palarca et al (2008) investigating the competencies needed by military nurse managers. The second, a small qualitative study from Finnegan et al (2016) explored the non-technical skills of nurses in the deployed setting. While Finnegan et al (2016) offered views from war time experience, the small sample size and lack of follow-up, even within the initial interviews

[16] JSP755 Centre-Determined Policy for Career Management and the Administration of Tri-Service Positions and Assignments (MOD, 2023).

means that it may not reflect the current 'ground truth' of a different

operation. Palarca et al's (2008) wider sample does give a broader view but

limiting to senior commanders and identification of over 100 competencies

makes it difficult to practically apply the findings. In the context of military

operations, both studies are also now considerably dated. Despite the

competencies identified in both being universal to many settings, the

changing nature of military deployments, rapid development of military

healthcare and differing theatres of operation means that the context for the

skills may have evolved.

Although terminology differed between studies, common themes,

particularly associated with leadership were identified in both.

Communication skills, situational flexibility and adaptability were key

features. Palarca et al (2008) highlighted these as essential for

interoperability, the ability of international forces to successfully work

together. However, they made little distinction between the deployed and

home roles due to the structure of the US military health service[17]. In

contrast, the deployed role formed the basis of the UK paper produced by

Finnegan et al (2016) who cited domains for all nurses regardless of level

of practice or position. Palarca et al (2008) though aimed specifically at

senior or management grades. Despite the absence of explicit skills within

the identified domains, there was agreement in both papers that clinical

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[17] US Military nurses deliver care in dedicated military hospitals both on deployment and in the home environment. In contrast UK Military secondary care nurses deliver UK based care as imbedded units within the NHS serving both the civilian and defence populations.

competence was a requirement of credible nursing leadership. Furthermore, both papers discussed the need for military nurses to balance multiple skills and be able to transition quickly from one to another as the situation changes.

Communication was an explicit skill identified by Palarca et al (2008) but was not identified by Finnegan et al. Although communication was discussed in relation to direct patient care, the lack of defined clarity between competence and characteristic confuses the issue. Both papers recognised the unique demands placed upon military nursing personnel, especially within the deployed setting. Consequently, they identified the need for military skills to meet the extensive challenges faced on operations form part of the core domains.

In a narrative paper, Ross (2010) considered the unique nature of the military setting led her to conclude that military nurses require groups of competencies which are accessed concurrently. Nursing and patient care and deployment competencies are the specific technical competencies associated with role delivery within the operational setting. As such they include being able to perform clinical skills in deployed conditions wearing specific PPE for example. Leadership was a non-technical competence group identified by Ross (2010) and included:

1.   Executive leadership – integrity inside and outside of the

organisation, team building and collaboration with other healthcare

disciplines and, application of good communication skills throughout the

organisation.

2.   Communications – interpersonal skills to connect with the people,

teams, and clinicians in the deployed setting.

3.   Professional Development – to support and mentor junior members

of the team, using strong communication skills and promoting an

accountable environment.

4.   Global awareness and interoperability – ability to understand the

setting and provide leadership or management of change.

Ross (2010) asserted that leadership is an expected competency domain of

the military role and as such having the skills to support it is vital to

success. Indeed, previous work by Reineck et al (2001) put leadership as a

central issue along with 5 other technical abilities[18] required for the

operational setting. They argued that strong leadership with the associated

skills, is a necessity when meeting the demands of deployment arena.

However, leadership is the only non-technical competence discussed in

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[18] Clinical nursing, operational nursing, soldier and survival skills, personal/physical/psychosocial and group interactions.

these papers. With much of their work focused on technical skills and self-assessment, there is only limited discussion of objective measurement or assurance of nurses prior to operational deployment.

A later study by Ma et al (2021), suggested an onion model of military nursing competence with motives at the centre working through traits and identity to abilities as the outer layer. As a small-scale qualitative study within the Chinese military, their model appears to offer understanding of competence. Ma et al (2021) do articulate the need for nurses to balance their military with their caring roles and highlight competence as having multiple elements. Indeed, these are common themes in the literature. However, deeper analysis of methodology and findings demonstrates only superficial understanding with no detailed exploration of the issues and only limited thematic analysis. The primary focus surrounds the clinical and military abilities with the underlying individual traits or characteristics such as loyalty, obedience, or dedication to achieve personal competence. Contrastingly, both Finnegan et al (2016) and Palarca et al (2008) highlight leadership, team building and communication as core competence domains for successful functioning as a military nurse. Whilst these may reflect cultural expectation within Chinese military nursing, based on missing references, limited quality of the research and exploration of issues, the paper by Ma et al (2021) was excluded from Hughes's (2021) systematic review.

3.4 Part 3: Conclusions

In the broadest of terms competence is viewed through the literature as the 'ability to perform'. However, with context being a golden thread in how that performance is utilised, this statement gives organisations and individuals little direction. All models take differing views on how competence is learned, developed, and refined but the ultimate outcome and measurements remain tethered to requirements of the individual and the circumstances in which they find themselves. As a result, experience has a clear role to play in competence. Authors such as Benner elaborate within the clinical setting by articulating the importance of the journey from novice to expert. Essentially nobody is born competent, they must learn, practice, and utilise skills in a variety of situations to transition along the pathway to expert, a point which not everyone will achieve. White (1959) in his early academic observations used this in relation to core human skills such as walking or talking, but it is apparent that all aspects of human behaviour and skill are rooted in the need to start somewhere. Furthermore, the caveat that no person can be competent in all things as all times adds further weight to the contextual argument.

The intellectual demands required for competence vary wildly between situations. The ability to blend skills, knowledge, and experience to meet the demands of the situation will be determined by the ability of the individual and the complexities of the requirements. As these encounters

become more convoluted the challenges to the individual increase.

Competence is more than simply performing a task, it is a complicated

concept which requires understanding of what is required (skill, knowledge,

and experience), where it is being utilised, when is it needed, how is it

carried out or indeed measured. Even considering such a wide array of

factors, there are vagaries within each area that determine how

competence is defined and understood by those in that particular setting.

Using competencies as composite elements of each domain, facilitates

means by which each domain can be broken down, taught, and measured.

This is well established when considering technical ability. Caution must be

applied in this approach to complete contextual competence to ensure that

completion of competency and the core skills alone are not the sole

measure of competence. Skills such as driving a car have clear practical

standards to be met in order the be considered competent. However, the

ability to move a car in a safe space does not necessarily reflect the ability

to competently drive on a highway with other road users. In contrast to

technical competencies, non-technical elements of competence are less

easily captured or agreed upon. Whilst domains can be mapped from

various models, their subjectivity and contextual application adds to the

challenge of finding a universal approach.

This further begs the question of whether it is appropriate to try to develop

a universal approach or whether one bespoke to the professional group

and the setting would offer greater value. Regardless, key to the successful

application of any contextual competence is use of language common to all within the structures. Although there are likely to be common features between organisational outputs, the nuances associated with domains in specialist fields require setting appropriate language and contextual understanding of the environment, people, and associated competencies. For example, personnel management within the engineering sector are likely to have common points with those in the medical sector. However, the competencies required will need to be appropriately termed to reflect the personnel, nuances in role and performance standards and setting to which they are being applied.

The increasingly diverse role played by British military nurses in healthcare, whether in the battle space or in response to disaster, epidemic or humanitarian situations, whilst contentious, remains a powerful tool in alleviation of human suffering. Preparation for operations and the deployment itself places a wide array of demands on nurses beyond those experienced within domestic healthcare systems. The British military nursing role is complex, varied and often carried out in settings lacking the technologies, equipment or comforts associated with the home setting. Many of these environments are fraught with dangers such as combatant activity, climatic risks or regional vectors which pose significant danger to those operating within them. Additional psychological challenges come from the duality experienced when reconciling the 'caring' role with being part of a military force. Balancing limitations, often set beyond the control of

the deployed medical teams, with providing the desired high standard of care is an arduous process for military nurses. This can be complicated further by remaining alive to the potential politicisation of their roles. These situations require not just the technical competence to carry out a plethora of clinical procedures but a high degree of non-technical competence to enable successful functioning as both an individual and as part of a team. Despite consensus across the literature of the complex nature of the British military nursing role (Finnegan et al, 2016; Beuamont and Allen, 2012; Ross, 2010; Palarca, 2008), there remains paucity in understanding of the specific non-technical competencies and how this can be assured.

When not deployed on operations around the globe, much of the UK military secondary care nursing is carried out in the NHS. Whilst this is the logical environment for the development of clinical skills, it rarely reflects the unique demands of the operational setting. The frequency of multiple casualty events, nature of disease or injury in combination with environmental factors limits nurse readiness. This results in military nurses concluding that they feel underprepared for what they are to face (Finnegan et al, 2015; Beaumont and Allen, 2012). Military nurses report wider factors such as the disparity between the home role in the NHS and the role played in a deployed unit, the requirement to meet the sometimes-conflicting employment demands of two masters and a lack in understanding of NHS managers in the clinical setting as further complications for deployment (Finnegan et al 2016, 2015; Beaumont and Allen, 2012).

This is compounded by a job description structure which lacks common language with the NHS and any detailed mapping to the NHS nurse grading structure supported by a deeply subjective reporting process. In combination, not only do these reinforce the duality reported by military nurses but limit the professional development opportunities which aid role and career development.

In line with the broader conversation on competence, understanding the contextual requirements of British military nurse NTC is key to onward development. Although the discussed competence models differ in construction, commonalities centred around non-technical competencies such as aptitude, lateral thinking, communication, leadership, experience, and team working are evident in many. How these are executed in practice is driven by the context in which they are being used. In this, military nursing is no exception. Ross (2010) argued that development of the nursing role for both the operational and home setting was dependent upon sustained and ongoing research into the requirements. The challenge for British military nurses is the various environments in which they work both clinically and militarily. Unlike the NHS in which British military nurses maintain their clinical skills, there remains no knowledge and skills framework which reflects the NTC requirements of their operational or UK roles.

This is further confused by application of the DONC framework which, despite measuring only technical competence, is used as the primary document to assure nurses for operational deployment. This lacks any agreed non-technical domains and competencies specific to the military nursing sphere, adding to the challenge of objectively assuring or supporting the development of the individual or team. Furthermore, in failing to consider the wider NTC requirements the DONC, along with poorly constructed job descriptions, provides a little guidance to the NHS setting on what is required for British military nurses to suitably prepare for deployment, compounding the sense of under-preparedness described by Finnegan et al (2015) and Beaumont and Allen (2012). This results in emergence of the research question for this study:

What are the non-technical competence requirements for UK Military nurses in their operational and UK roles, how can these be met and how can they be assured?

By exploring British military nurse understanding of their NTC requirements, this study will give a starting point for the development of further processes to develop associated skills. In doing so, it will aid in plugging the current research and knowledge gap demonstrated in the literature review.

CHAPTER 4 – Methodology

4.1 Introduction

Split into two parts, this chapter explores the GT methodology employed throughout this investigation. Part one sets the scene, discussing the use of GT as a methodology in nursing research, justifying the approach taken in this study based on the epistemological and ontological position of the author. Part two goes through of the practical processes and their associated methodological challenges.

4.1.1 Methodological Choice

The world in which we live is complex, interpreted through a wide array of lenses allowing a diverse picture of how we exist to be built. Each of these lenses enable explanation and understanding of events which in turn help us to understand our place, our interactions with others, and answer questions rooted in opinion and perspective. Having established both the subjective nature of competence and the lack of existing research specific to the British military nurse setting, the methodological approach to answer the research question using opinions, views and beliefs is firmly rooted in the qualitive paradigm (Busetto et al, 2020; Hammarberg et al, 2015; Guest et al, 2013)

Until relatively recently, much of this understanding was driven by a quantitative approach based on the need to test hypotheses. This

positivistic approach can facilitate exploration of what is happening but often lacks the fineness to fully comprehend the why, particularly when investigating subjective topics (Glaser and Strauss, 1967). Squires and Dorsen (2018) asserted that qualitative investigation is a vital tool in exploring the experiences of services users as part of developing healthcare delivery. Indeed, Jamali (2018) identified an increase in recent years of papers using qualitative methodologies to explore issues. However, deciphering meaning from views and thoughts is difficult and often subject to challenge. Glaser and Holton (2004) argued that qualitative investigation is frequently viewed as lacking scientific rigor or even biased by the researcher, especially when there is little existing information in an area of study. Indeed, positivists have long decried qualitative research as anecdotal, lacking validity and reliability (Charmaz et al, 2018).

The growing trend for use of qualitative research has seen the emergence of various methods of which two have become the most well established: grounded theory and phenomenology (Urcia, 2021). Kahlke (2014) continues by observing that within the qualitative approach, researchers seek to find a balance between the methodological flexibility afforded by exploring thoughts and views with structure enough to legitimise the outcomes. She goes on to note these approaches as sitting under the banner of general qualitative methodologies. This generality is disputed by Urcia (2021). Whilst both methods were born to counter the dominance of positivistic process, she argued distinct historical, epistemological, and

ontological origins separates each process meaning the idea of generality

is moot. Broadly speaking phenomenology uses an interpretive process to

understand and consider shared life experiences of people (Burns and

Peacock, 2018). Originally developed by Barney Glaser and Anselm

Strauss, Grounded Theory (GT) is an iterative process to compare patterns

in social processes and behaviours to produce a theory (Glaser and

Strauss, 1967; Corbin and Strauss, 2015). The selection of the method for

use is dependent on the philosophical position of the researcher and the

aim of the investigation being undertaken (Cresswell and Poth, 2018;

Richards and Morse, 2012). The aim of this study is:

To explore UK military nursing non-technical competence for UK and
operational roles and how can these be met and assured.

The research aim will be achieved through the following objectives:

1. Understand how military nurses perceive both competence in general
   terms and more specifically non-technical competence required for
   their roles.

2. Identify the specific non-technical competencies nurses require for
   their UK and operational roles and how these fit into the broader
   understanding of competence.

3. Understand any perceived differences between the UK and deployed operational nursing role.

4. Understand what experience focus group members have of using non-technical competence in the UK or on operations.

5. Use the outcomes of objectives 1-4 to identify a conceptual knowledge and skills model for non-technical competence which could contribute to improved job descriptions, professional development, and objective assurance UK military nurses.

Whilst a phenomenological approach would enable deep exploration of the lived experiences of British military nurses to partially meet the aims and objectives, it would not enable the development of any theoretical outcomes to guide British military nurses. The research question at the heart of this study centres on the social process of competence associated with their operational and UK roles, and what structures are required to support them. The use of a GT approach can facilitate deep exploration of the social complexities of nursing in the British Military to develop a theoretical outcome to refine NTC and how this can be applied on operations and in the UK. Understanding the NTC requirements, with stakeholder involvement will help to develop military nursing roles and identify and manage suitable placements at a grade which reflects the knowledge and experience of the individual. Additionally, this will provide

the first step in the development of a theoretical knowledge and skills

framework which can be used to aid in objective reporting and assurance.

In turn, this can begin the process of establishing informed job descriptions

which can support improvements in training and clinical exposure during

time spent in the NHS preparing for future deployed roles. However, as

detailed in Part 1 of this section, the choice of model under the banner of

GT is a considered personal one, requiring insight of the nuances of each

discussed in the next section.

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4.2 Part 1: Grounded Theory

4.2.1 An Overview of Grounded Theory

As a verification method seeking to develop and test hypotheses, positivism

created early conditions to understand how the world around us works and

has long been a mainstay of research. With well-established and robust

processes, it was widely accepted as a key means of data collection and

analysis. However, during the 1960's, largely fuelled by the Marxist

perspective, positivism was subjected to a growing critical voice. Alvesson

and Skolberg (2009) observed that researchers no longer had faith in the

ability of statistical analysis to describe reality or to understand deeper

underlying processes. They go on to note that critics of the positivist

method view reality as being more than what is observable, that layers exist

behind empirical truth. Indeed, the methods of starting with swathes of

numerical data or with guesses being made as to connections between the data, central aspects of the positivist approach, no longer gave the means by which human social phenomena could be understood. Spencer et al (2020) described the requirement to differentiate between natural science where processes are observed and human science where life needs to be understood. Corbin and Strauss (1990) elaborated on the challenges by noting that qualitative researchers found their research being assessed against quantitative standards by quantitative researchers in quantitative terms, which many thought inappropriate to their outcomes. Corbin and Strauss (1990 p.3) maintained there remains the imperative for "good science" but also a need to redefine the process to cater for the intricacies of social phenomena. In response to this growing imperative, the qualitative paradigm has expanded rapidly but the gaps between the individual methodologies seem to be as big as those between the two main architypes (Spencer et al, 2020).

GT was founded on the belief that insight into human reaction to specific phenomena is central to developing understanding of behaviour which required an approach to research that was more than simply describing events (Vollstedt and Rezat, 2019; Boychuk-Duchsher and Morgan, 2004). Glaser and Strauss (1967) hoped by shifting from traditional positivistic methods would allow greater insight into phenomena not easily explained by numerical data. Glaser (1978) asserted that central to GT, is the desire to explore human interaction by understanding social processes. Its ability

to explore human experience and how participants make sense of their world means that it is commonly used in healthcare research and places it within the sphere is subjective interpretivism (Singh and Estefan, 2018; Neill, 2006). In contrast to positivism, this approach builds a subjective view of reality based on the multiple interpretations of those experiencing it. Consequently, the emerging truth should not be considered absolute but rather, taken in context of time, place and population from which the founding data was gathered (Rogers, 2020). This understanding of social situations through interpretation of the perspectives of those experiencing them, gives a unique insight into human behaviour (Skeat and Perry, 2010; Charmaz 2000). Although having diminished in the years prior, symbolic interactionism enjoyed something of a renaissance with the advent of GT (Alvesson and Skoldberg, 2009). This model applies Blumer's (1969) three principles of symbolic interactionism[19] to allow researchers to take a qualitative approach accounting for the changing social perspectives of those involved (Carter and Fuller, 2016; Aldiabat and Le Navenac, 2011).

Glaser and Strauss (1967) developed a process by which behaviour could be both explained and predicted. They sought to move away from a method where grand theory, hypotheses or guesses as to the relationships between data are tested or where theories are forced onto the phenomena as a means of explanation. In 'discovering' GT they aimed to 'ground' the

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[19] 1. Humans behave towards things based on meanings they assign to them, 2. These meanings are developed from interactions with those things and other humans, 3. Meanings are modified and change as they are interpreted by those experiencing them.

theoretical outcome in the data making the process understandable for academic, student and layperson alike. A central tenet of this approach is allowing the theory to emerge from the data without the researcher forcing preconceived ideas or existing thought onto any explanation. By doing so, the theoretical outcome is robust and far more difficult to refute. In taking a structured approach where the researcher remains objective and having elements of process akin to positivism, they asserted their approach should also be clear enough to be applied to quantitative studies where appropriate (Urquhart, 2019). This new 'post-positivism' allowed investigation of areas which had previously been difficult and proved particularly useful in facilitating the construction of theories when there is a dearth of existing work. Their new approach focused on the development of a thorough methodology which not only stand up to examination from quantitative traditionalists but would demonstrate a meticulous process to qualitative investigation. Essentially, Glaser and Strauss sought to legitimise inductive qualitative research as a valid and rigorous method of enquiry in which phenomena are both described and explained (Corbin and Strauss, 1990). In doing so, they rejected the positivistic monopoly on rigor within research and the established idea that qualitative research could not result in new theory (Charmaz et al, 2018). Consequently, GT is now commonly utilised to develop new theoretical approaches in healthcare and as such has become one of the foremost used methodologies across a range of specialities including nursing (Singh and Estefan, 2018; Mediani, 2017; Corbin and Strauss, 2015; Parahoo, 2014).

Tie et al (2019) described GT as both a method of enquiry and the outcome of that enquiry, useful when there is limited available information on a subject or where investigation into the social area is difficult. The core aspect of both is the resulting theory being firmly grounded in the data. This theory is based on a framework of interconnected categories with their relationships identified through linking statements (Corbin and Strauss, 2015; Hage, 1972; Glaser and Strauss, 1967). Glaser's view of the theory generated by GT methods was that it was transcending rather than based on confrontation or synthesis (Glaser, 1978). A confrontational approach requires the researcher to debunk previous work, justifying why it should replace what exists rather being considered useful. In doing so, Glaser (1978) argued that researchers lose what is good about the original work. In contrast, synthesis seeks an integrated approach. He went on to say this increases the danger of forcing a theoretical outcome by pushing together multiple theories or approaches. By being transcending, Glaser argued that GT considers existing work and variables which fit the investigation but is not constrained by them. Constant comparison is an iterative and inductive process which enables the user to reduce the information by constantly recoding it (Glaser and Strauss, 1967). Flexibly applied it enables the researcher to go beyond an integrative approach to theoretically saturate the issue and create a clear theory strongly grounded in the data.

Glaser and Strauss (1967) concluded that any theory generated is considered to fall into two broad categories: substantive and formal.

Substantive theories are narrower relating to specific processes and specialist areas in sociological enquiry such as patient care, nurse education or competence within a specific environment or setting. In contrast, formal theories are more general, relating to broader areas of social investigation such as competence or behaviours. As a result of being applied to specialist areas of social situations, substantive GT theory is a more common output of this investigative method. (Urquhart, 2019; Urquhart and Fernandez, 2012; McCann and Clark, 2003; Glaser, 1978). Theories can also be thought of as being 'middle-range' where they fall into the space between specific hypotheses and grand theory. Corbin and Strauss (2015) posited that these middle-range theories can form a bridge between substantive and formal theories.

In shifting away from the traditional positivistic methods of the time, Glaser and Strauss (1967) sought to understand perceptions of events without the need to test preconceived ideas. They based their 'Grounded Theory' (GT) methodology in development of ideas derived from or 'grounded' in the data collected (Glaser and Strauss, 1967; Corbin and Strauss, 2015). By tethering the emerging theory to the data collected Glaser and Strauss, aimed to close what they saw as an excruciating gap between theory and empirical research. The concept of the researcher holding a passive and neutral position would allow the emergence of a theoretical approach, uncorrupted by previous research or discourse. As GT has become more

commonly used, new models have grown out of the varying philosophical positions of researchers.

As GT has become more established, interpretations on the original process have emerged. Differences in the epistemological (the study of knowledge) and ontological (understanding of being) positions of researchers has led to the evolution of distinct models within the GT process. Despite this, there remain several core elements to any GT approach, and it is within each of these authors have diverged from the original method discovered by Glaser and Strauss (Qureshi and Unlu, 2020; Nobel and Mitchel, 2004; McCann and Clark, 2003; Charmaz, 2000). These common characteristics include:

1.   A broad starting question.

2.   Knowledge drawn from existing literature.

3.   Concurrent data collection and analysis.

4.   Constant comparison of data.

5.   Memo keeping.

6.   Theoretical sampling.

7.   Theoretical sensitivity.

8.   Theoretical saturation.

Each core element contributes to the creation of a robust practical

approach and theoretical outcome. Hoflund (2013) asserted that within

these, sits an iterative process between data, analysis and theory

emergence common to all models, regardless of epistemological or

ontological position. However, despite having a framed approach to GT,

there remains a methodological flexibility which enables researchers to

adapt their processes to the investigation at hand. Charmaz (2000) argued

that application of the correct analytical tool for the question and non-linear

application of the core features, enables researchers to identify links in the

data and spot the emerging theory. Indeed, Urqhart (2019) noted that the

methodological freedoms afforded by the GT process enhances the quality

of the outcome. Furthermore, it is the investigator's experience and

understanding of the subject area which directs how each of these steps

are used. This results in an in-depth study founded on rich data rather than

use of GT and the associated jargon to legitimise the study (Glaser, 2009).

It is out of these freedoms and not having a didactic process, that multiple

models under the wider GT cannon have evolved. Whilst this gives the

researcher an element of choice within GT, Piantanida et al. (2004) argued

that it can be confusing and lead to inconsistent application of GT which endangers the validity of the final product.

In shifting away from the dominant positivist paradigm, GT required a more interpretivist approach. Rather than beginning with a set idea, this inductive-deductive approach starts with a research situation. By concurrently collecting data, analysing, and theorising, this non-linear process enables the researcher to nurture the development of ideas which then mature through constant comparison into a coherent theory (McGhee et al., 2007). This naturally led to greater influence of epistemology and ontology on the final theories challenging the position of the researcher as being entirely neutral throughout the data collection and interpretive processes (Birks et al, 2019). The impact of these philosophical positions should not be underestimated. Having a significant effect on how the core elements are applied this directly impacts interaction with participants, the analytical and interpretive process, and any subsequent theories (Chun Tie et al., 2019). Corbin and Strauss (2015) were only too aware, insisting that all researchers fully understand their philosophical positions before using any GT methodology.

4.2.2 Grounded Theory Canon

As an iterative method, GT provides researchers with a structured way by which to interact with the data. Rather than being predetermined before the

investigation commences, GT studies enable the emergence of the analytic focus of the researcher to emerge throughout the investigative process (Charmaz and Thornberg, 2021). These authors go onto note that systematic application of specific processes enables researchers to demonstrate transparency and rigor in their inquiry. However, since its inception, GT has grown in different directions resulting in the emergence of several schools. A notable point in its history is the divergence in understanding of GT as a research method between its originating authors, resulting in a somewhat sectarian approach to the GT cannon. The discussion on this evolutionary process has often been bitter and heated with each author pronouncing their model as the most adept at identifying new theory. Following the development of the original Glasserian approach, Strauss formed a new working relationship with Julie Corbin to establish a new perspective. More recently, Kathy Charmaz (2006) has developed a constructivist model which adds a further shift from the post-positivist position held by Glaser. Each author went in different directions in how they viewed the collection of data, use of existing information and the way in which any collected information is interpreted. Mills et al (2006 p.26) argued that this led to the formation of a GT "methodological spiral". They described this as a scale on which each version of GT moves further away from the postpositivist origins of Glaser's model. The place each variant holds is directly linked to the epistemological and ontological position of the originating author. One end of this scale sits closer to traditional positivist approaches in which philosophically, the world and associated problems

are seen objectively. At the other end, a more interpretivist approach is taken where the role and influence of the investigator are not only acknowledged but embraced as part of the process of new theory generation.

The post-positivistic approach applied by Glaser and Strauss in the original model was based on objective scientific process where external influences and biases are actively reduced. Rieger (2018) asserted that use of this 'classic Glaserian' GT (CGGT) makes the ontological assumption of the researcher as an observer of human behaviour, where it is understood that reality exists, but it is impossible for anyone to fully perceive. Described by Assimos and Pinto (2022) as first-generation GT, Glaser and Strauss's (1967) model placed emphasis on agility in data collection and analysis without being fettered by an overly cumbersome structure. Instead, they preferred the freedom to build theories from the data collected. Holton (2004) went onto argue GT is not about descriptive accuracy and should not be burdened by associated issues of interpretation or constructionism. Her perspective supports the core GT tenet of using abstraction through constant comparison to aid conceptualisation of ideas which build a theory to explain rather than describe social phenomena. Clarke (2014) though argued that this approach lacks any rigor in the data collection process and as such doesn't meet many institutional requirements for research.

Not long after the 'discovery' of GT, Strauss's philosophical position shifted away from the post-positivism of the original model, and he started working with Juliet Corbin to redefine what they considered GT to be. Central to their view is the pragmatic notion of our experiences and interactions with others defining how we understand the world around us (Carter and Fuller, 2016). Their view of symbolic interactionism does not go so far as to argue that the researcher is part of the process, as Charmaz (2006) asserted, but does give greater leeway for previously held knowledge and experience to guide the researcher. Corbin and Strauss (2015) sought to find balance between the need for an objective approach to linear, unbiased data collection and analysis with the subjective nature of interpreting thoughts views and experiences. Although having objectivist origins, their method represented their belief that it is impossible for qualitative researchers to be truly unbiased, indeed they valued the enrichment that researcher knowledge and experience could add to the emerging theory. To balance the opposing ideas of objectivism and interactionism a key departure from the original model was the development of a more formulaic pathway for data analysis. As a response to enquiry from their doctoral students, Corbin and Strauss added coding to the interpretive process. This aimed to reduce the impact of the researcher without removing the guiding insight. Furthermore, by coding the data, they argued that theories could be both identified and verified during analysis. However, Glaser (1992) aggressively rejected the idea of verification in the data arguing that coding imposes predetermined categories, negates constant comparison, and adds

unnecessary structure on data analysis. He argued that using this method

no longer enables the resulting theory to naturally emerge but, forces it out

(Glaser, 1992). Fram (2013) observed that Corbin and Strauss and

Charmaz both modified constant comparison from a technique to a method

which could then be pragmatically applied by researchers in a way best

suited the research situation. Additionally, the role played by existing

literature and knowledge became a further change for Strauss who

acknowledged the need for some understanding for what is already known.

Although this will be discussed in greater detail later, Glaser saw Strauss's

shift in position as a huge betrayal of their original method (Alvesson and

Skolberg, 2009). In occupying a large portion of the middle-ground on the

GT methodological pathway (Figure 1), Corbin and Strauss (2015) posited

that their model gave a robust process which utilises the language

necessary to articulate evidence-based theoretical foundations to develop

nursing care.

Figure 1. The GT methodological pathway.
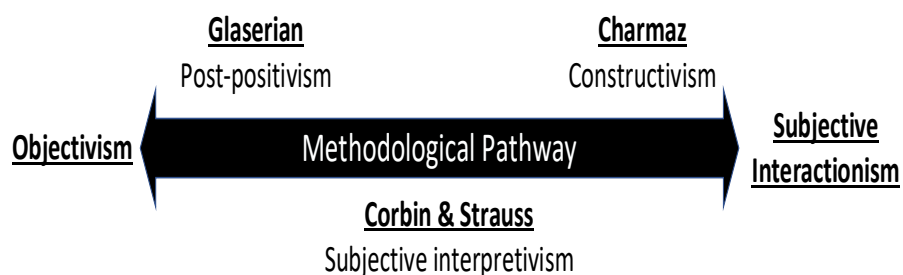
If CGGT occupies the objective space on the methodological scale and

Corbin and Strauss the centre, then Charmaz's constructivist model sits in

the subjective interpretivist end. In her relativist ontology, Charmaz (2006) asserted that the world objectively exists but must be interpreted through the experiences of those who live in it. Indeed, this very much includes the views of the researcher, with advocation of research being a shared, collaborative process between subject and investigator (Charmaz, 2006). Contrary to the position held by Glaser (1978), where objectivity is key, Constructivism embraces subjectivity based on the understanding that the researcher is part of the world being investigated. Consequently, as the research progresses, the views of the researcher can affect the views of participants in the same way that the participants can affect the investigator (Low and Hyslop-Margison, 2021). Charmaz et al (2018) argued that Constructivism is ideal for social investigation because of its rejection of the objectivist stance, the consideration it gives the viewpoints of both researcher and participant and the strong use of reflexivity. That Corbin and Strauss (2015) agree that theories are constructed by researchers from the stories and experiences of participants demonstrates how much overlap there is between each of these approaches. Bryant (2009) argued that a paradox is created within constructivism by the contextual nature of knowledge within the model. There is a danger of devaluing any outcomes of this model resulting from the shift towards relativism from an objective reality in which knowledge is universally accepted.

Having been initially driven by the need to understand human behaviour and the development of later models exploring lived experience, GT is

largely tied with the qualitative paradigm. It is easy to understand this when it is frequently associated with pragmatism, realism or interpretivism (Holton, 2008). Charmaz (2000) argued that the biggest contributory factor to the confusion was the lack of clarity in Glaser and Strauss's (1967) original 'Discovery' text, worsened by the broad array of terms used by scholars in defining methodological boundaries not just in GT, but within the wider qualitative branch of investigation. Glaser, particularly after the split with Strauss, continued to advocate GT as a neutral methodology which could be applied equally well to quantitative or mixed method investigation. In doing so, Glaser rejected the notion of interpretivism, worried that its assignment solely to the qualitative paradigm would weaken its strength as a general methodology (Glaser & Holton, 2004). More recently, Urquhart and Fernandez (2013) considered GT to be epistemologically neutral, that as a construct it conformed to neither positivism nor interpretivism. Rather, they argued that it is the position of the researcher which drives the process and outcome. Consequently, researchers are required to understand and articulate their positions which enables appropriate evaluation of their findings.

The growth in GT methodology fuelled by increased connectivity and access to information means that it is impossible to see it in polar terms (Birks et al., 2019; Chamberlain et al, 2013; Mills et al., 2006). Flexibility in applying the core tenets based on the philosophical position of the investigator have a direct effect on the generation of new theory. This is

based on how the researcher interacts with both the participant and the data gathered. However, Charmaz and Thornberg (2021) keenly noted the methods used within GT are now being applied to studies either in conjunction or in place of new theory generation. Such areas include new policy development or the advancement of professional practice. The subjective nature of qualitative investigation and the interpretive process means that the choice of model used is a deeply personal decision. As a result, it is easy for differentiating parameters to become blurred and approaches to overlap. Despite the growing popularity of GT in research and its coverage in the academic world, there are challenges to both its successful application and its use as a pragmatic tool. In their exploration of GT, Timonen et al. (2018) argued that GT is anything but pragmatic. They noted that researchers frequently find the GT process convoluted going so far as to state that the dogmatic adherence to the multiple rules makes it obtuse and difficult to use. As a result, research conducted under the banner of GT, frequently ignore its core principles, and produce confused outcomes. Whilst all authors provide mitigation for the methodological challenges, responsibility sits with the lead investigator to ensure that the approach selected meets the needs of the question as well as those of their own epistemological and ontological position.

4.2.3 Selection of GT and the Straussian Method

The popularity of GT reflects the ease of application across the sociological and nursing settings (Harvey and Land, 2022). Enabling exploration of complex issues, infrequently investigated, with often broad questions lends well to this methodological approach. The appeal of GT also stems from the flexibility Glaser and Strauss (1967) stress in concluding that researchers need not be purest or didactic in their application. Methodologically flexible use of theoretical sensitivity and theoretical sampling gives freedom for the resulting theories to emerge in a form suitable for the investigation and setting. Having already discussed the selection of GT as the overarching methodology for this research question, it is important to consider the epistemological and ontological position of the PI and influence on the selection of approach (O'Connor et al, 2018). O'Connor et al (,2018) argued that failure to do so results in not necessarily understanding the influence this can have on the methodological choices.

Glaser (2007) identified that GT considers the multiple, varying perspectives of the participants. Indeed, this is reflected across all three GT approaches. Throughout the process, data is considered and brought to abstract conceptualisation through which patterns are identified and a theory emerges. His perspective notes the complexities of this process but argues that Charmaz's application of relativism is too simplistic to describe what is happening. By taking this position, Glaser (2007) posited the

researcher fails to consider the direction from participants in how to consider their perspectives. Instead, addition of the researcher's own views as a component of the theory, amounts to an imposition on the data and results in epistemological bias to legitimise the findings. He described bias as another variable to be considered and constructivism an inappropriate means of negating it. Glaser's post-positivistic views encompass reality as an objective concept which can be studied and understood without the application of preconceived ideas (Charmaz, 2014).

In occupying the methodological space between Glaser and Charmaz, Corbin and Strauss (2015) argued that the very nature of qualitative research renders the application of objectivity impossible. Rather than going so far as Charmaz's perspective of constructing theory with participants, Corbin and Strauss (2015) argued experience and knowledge enables researchers to dig into and respond to the data. They acknowledge the risks of experience affecting perception of data but argue that this can be mitigated by remembering that it is the perspective of the participants being explored, never losing sight of the data, working with the concepts as they emerge, and not being driven descriptive detail.

Following a great deal of introspection, exploration of the literature, and consideration of personal perspectives, it became clear that Glaser's approach was too far towards the objectivist end of the GT methodological spectrum. The disconnect with the knowledge and experiences of the PI

throughout the interpretive approach did not sit comfortably with the epistemological and ontological position. Taking the original Glaserian approach would fail to recognise both the organisational and deployed operational experience of the researcher and the contribution this makes to the interpretive process, theoretical sampling, and theoretical sensitivity. It is a belief of the PI, that use of personal operational experience and understanding of the organisation not only helped to identify the subject being researched but guided in the interpretive process. This epistemological contradiction with the Glaserian approach meant it was excluded as the applied GT methodology.

Both the other approaches consider the subjective nature of the world, but Charmaz's Constructivist approach gives too much emphasis on the role, thoughts, and contribution of the researcher to the outcome. Although this research accepts the subjective nature of the world, it seeks not to create an interactionist outcome advocated by Charmaz (2014). Rather, by exploring the data with familiarity of the setting and experiences of participants without imposition of personal views on the emerging theories, this research is set in a subjective interpretive epistemology. As the Straussian method aligns with this epistemological position, the method developed by Corbin and Strass (2015) has been used.

4.2.4 Theoretical Sensitivity and Literature Review in Grounded Theory

Theoretical sensitivity within GT has triggered considerable debate, with Glaser, Corbin and Strauss and Charmaz all offering differing perspectives. All agree that theoretical sensitivity is central to the GT process. However, they differ in views on how one becomes sensitive, and the role played by previous experience and understanding of existing work, particularly, the use and timing of the literature review (Thistoll et al, 2016; Lo, 2016). Bryant (2020 p.192) highlighted the importance of theoretical sensitivity by specifically referring to it as the 'Holy Grail'. Indeed, Lo (2016) put forward that the very success of a GT study is dependent up on how theoretically sensitive the researcher is to the relationships between properties in the data and the resulting categories. Despite its significance, Glaser (1978) openly admits that it was 'glossed' (p.1) over in the original text. With the backdrop of considerable debate between many authors and observers of GT, it is universally agreed that theoretical sensitivity is a core concept to be mastered by the investigator. The identification of patterns and codes within the data allows the researcher to identify theories emerging from the data (Glaser and Holton, 2004; Corbin and Strauss, 1990). Glaser and Holton (2004) went on to identify two broad characteristics required for researchers to be theoretically sensitive. Firstly, researchers must have the temperament to distance themselves from what can be a confusing body of data. In doing so, researchers can then remain open to the preconscious processing needed to enable emergence of theory. Secondly, the GT

researcher must have the ability to make conceptual connections between data sets, thinking on multiple levels to ensure that patterns can be identified. They argued that to be theoretically sensitive, researchers must approach the process with as few preconceived ideas as possible, especially avoiding formation of any hypotheses. However, Corbin and Strauss (2015) go on to highlight that becoming theoretically sensitive is not an easy process with 'meaning' often remaining hidden in the data. Understanding of theoretical sensitivity as a pillar of the GT approach is universal across the methodological spectrum. However, it is here that agreement ends, with how one becomes theoretically sensitive the subject of considerable discussion (Thistoll et al, 2015).

Within the wider debate around the methodological spectrum and theoretical sensitivity, a particularly contentious issue lies in how existing literature is used and when it should be examined (Thistoll et al., 2016; Lo, 2016). Giles et al (2013) argued that this debate is largely polarised around two views: use of existing information as a data source after collection from the subjects or, use of the data at least as a preliminary review subject. In his early works, Glaser was vehemently opposed to the early use of a literature review arguing any existing literature should be ignored to avoid contamination (Glaser and Strauss, 1967). Although acknowledging the challenges, Glaser and Strauss (1967) argued that researchers must come to GT studies as a blank slate where extant theories and understanding are set aside. He went so far as to suggest that informative use of the literature

would contaminate free thinking and could serve to constrain natural theory emergence. This was later elaborated on to assert researchers should be receptive to new theories and not allow data collected to be viewed through the lens of existing knowledge or biases (Glaser, 1978). Consequently, any literature review should not be undertaken until much later in the data analysis process to ensure the start of the research is not blocked by predetermined ideas (Ramalho et al, 2015; Glaser and Holton, 2004; Glaser, 1992). They held the view that undertaking a literature review creates high risk of overlaying previous knowledge and understanding onto the collection and analysis of data. In doing so, this violates the very premise of GT which is allowing the theory to emerge organically from the new data, not from existing data thus preventing the danger of imposing or imprinting previous theory onto the new data.

However, Glaser's (1978) approach is confusing, fraught with contradiction and direction change. In 1978, Glaser openly admitted that he had 'glossed' (p.1) over both the importance and mechanics of theoretical sensitivity in his original work. Having so vociferously advocated evading existing data, in the very same paper, Glaser (1978 p.3) then notes sensitivity as 'being necessarily steeped in the literature'. This lack of clarity creates considerable confusion for those who use GT when existing understanding should be explored and the extent to which it should influence the investigative process. Heath (2006) highlights that far from establishing GT without any preconceptions, Glaser (1978) used his prior knowledge of

sociological process and existing literature to inform his new model, somewhat contrasting with the idea of unfettered free thinking.

Having worked closely with Glaser on the original GT, Strauss's position on the role of the literature and pre-existing knowledge diverged soon after. In his shared work with Corbin (2015), he argued that prior knowledge and understanding of the literature can direct theoretical sampling, refine or stimulate research questions and enhance theoretical sensitivity. Furthermore, remaining theoretically sensitive allows the researcher to identify the emerging theory within the data rather than verifying existing ideas or validating hypotheses (Reay et al, 2016). Corbin and Strauss (2015) argued that understanding existing literature can enable researchers to identify gaps in knowledge and stimulate development of new theory. Furthermore, insight into the experiences of others, which may differ from those of a prospective researcher, can offer a resolution to a problem not previously considered. Beyond these effects a literature review can also be used to confirm GT as the most appropriate method, provide justification for the study, and aid in avoiding pitfalls experienced by other researchers (Thornberg, 2012; McGhee et al, 2007). Bryant (2009) argued that it is impossible to enter an investigation without any preconceived ideas or opinion-based bias. He goes on to note that this should be embraced and can in fact lead to innovative thoughts and developments within the GT process. The challenge for the researcher lies in finding a balance in coming to the question as a blank slate and having enough knowledge of

the area of investigation to be suitably sensitive to identify emerging

theories. Corbin and Strauss (2015) go further arguing that provided the

researcher does not allow existing literature to block creativity, a review can

be used more actively in GT research. A literature review can help to shape

the initial questions, enhance theoretical sensitivity and comparisons can

be made which result in new questions or suggestions to aid theoretical

sampling.

Urquhart and Fernandez (2013) viewed coming to research as a blank slate

is not only a misconception of GT but potentially harmful to the integrity of

the study. The use of literature in GT, is a key component in enabling the

researcher to develop deep understanding of the issues, whilst facilitating

exploration of the theories emerging from the data. Consequently, they

suggested application of a phased approach to use of the literature. The

first part is a *'non-committal'* or preliminary literature review (Urquhart and

Fernandez, 2013 p229). This acts to set the scene by scanning literature to

define the problem, confirm GT as the appropriate methodology and

enables the researcher to become theoretically sensitive prior to fieldwork

(Birks et al, 2019). Importantly, the research question is not defined at this

stage, but identification of scope and specific areas for further study takes

place. The second or *'integrative'* part of the process runs concurrently with

data collection and analysis, enabling emerging theories to be compared

with existing work (Urquhart and Fernandez, 2013 p229). By seeking

convergence or divergence between literature and what is observed,

Urquhart and Fernandez (2013) argue that value is added to the final substantive theory. Using this approach is also advocated by Yu and Smith (2021) who added that existing literature is considered in the same sense as theoretical data collected during the investigation.

Based on selection of the Straussian approach and the DMS institutional process requiring an understanding of existing relevant research, a preliminary literature review was required. The systematic review by Hughes (2021) served as the starting point, demonstrating not only a lack of significant investigation into military nurse NTC, but low quality and high age of what does exist. Rather than biasing the outcomes, application of the theoretically sensitive approach to the data from the literature advocated by Thornberg (2012) has been taken. This resulted in taking advantage of existing investigations and literature to enhance sensitivity, rather than using data to develop what he described as *"pet codes"* (p. 255). Remaining open to patterns in the data has enabled deep exploration and the development of theoretically relevant themes.

4.3 Part 2: Methodological Processes

Giddings and Grant (2007) described the methodology as the thinking tools and the method as the doing tools. Having selected the Straussian GT methodology, part 2 of this chapter will outline the processes applied in the method of this study. This includes meeting of organisational and legally

required ethical processes, data collection methods, data interpretation and application of reflexivity in avoidance of bias.

4.3.1 Ethics

Prior to commencement of this study, ethical issues were considered to ensure meeting of national and institutional requirements. The nature of the investigation and application of policy meant ethical issues were thought to be low level throughout. However, key considerations of this study were:

1.   **Consent.** To meet institutional and ethical requirements, it was necessary to gain informed consent from all participants. The format for this was the informed consent form enclosed as part of the applications detailed below. To ensure data was stored in compliance with the Data Protection Act 2018 and institutional guidance, this form was converted to an electronic version using Red Cap[20] platform. This enabled participants to complete the form, which included all required questions and information, electronically. Additional functionality also enabled participants to provide a signature and meant that data was stored on a secure server. The participant cover letter and information form can be found in Appendix II. The consent form can be found at Appendix III. Both are also available through the link sent to participants: https://redcap.link/mt0mdouw.

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[20] REDCap (bham.ac.uk)

2.   **Confidentiality.** To ensure freedom of discussion whilst meeting data protection requirements, it was necessary to ensure that all information was kept confidential (Knott et al, 2022). All transcripts were anonymised at the earliest opportunity and digital recordings deleted as soon as the review and coding processes were complete.

3.   **Rank.** Within military organisations, rank is a consideration in research as it could be viewed as a possible coercive influence on involvement and responses. However, the investigator's rank of major was not considered a significant intentional influencing factor. During the focus groups, participants were advised that rank was to be ignored for the duration of the discussion. This included that of the researcher, who wore civilian clothing throughout all the focus group sessions and advised participants that they were to assume he had no prior understanding of the issues being discussed. This was assisted by the clinical professional composition of the groups within which academic discussion is commonplace. As part of the anonymisation process for the transcripts, rank was also removed. All participants were advised that they could withdraw from the process at any time with no effects on Service career or rank if they chose to do so.

4.   **Ethical Approval.** In line with Government guidance[21], JSP 536 (Governance of Research Involving Human Participants), Defence Medical

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[21] Applying for approval for MOD research involving humans - GOV.UK (www.gov.uk)

Policy and Staffordshire University Policy, application for, Defence Medical Services Research Steering Group (DMSRSG)[22], Army Scientific Advisory Committee (ASAC) and both university and military ethical committee approval was required:

a. **DMSRSG Approval.** Application was made with a supporting presentation to the DMSRSG on 9 September 2021 with approval given on 7 October 2021 (Appendix IV).

b. **ASAC Approval.** Application was made to ASAC using the MODREC application form. This study (ASAC reference no 467) was given approval on 3 May 2022 (Appendix V).

c. **MODREC Approval.** As this study involved current service personnel, an application to the Ministry of Defence Research Ethics Committee (MODREC) was submitted on 23 May 2022 reference **2151/MODREC/22**. Having met the requirements for a study that offers no material ethics issues due to minimal risk, minimal burden, and minimal intrusion to participants with minimal risk to the researcher, the study was deemed appropriate by MODREC for a proportionate review (JSP536 P2 Ch 4). This enabled review of the study through sub-committee with researchers informed of outcomes within twenty

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[22] Surgeon General's Medical Directorate (2023) Research, Quality Improvement, Clinical Audit and Service Evaluation. A Defence Medical Services Handbook

working days. Following first review some minor amendments and clarifications were requested. Second submission with the requested adjustments resulted in MODREC approval for the study being given on 15 July 2022 (Appendix VI).

d. **Staffordshire University Ethics Committee Approval.** Following MODREC approval, a proportionate review submission was made to the Staffordshire University Ethics Committee which was approved on 19 October 2022 (Appendix VII).

4.3.2 Focus Groups

With various means available for data collection in qualitative research, there is a need to identify which best suited the aims, objectives, and selected methodology; questionnaire/survey, in depth interview or focus group interview. O'Cathain and Thomas (2004) identified that construction of questionnaires frequently poses challenges to researcher in design and structure to yield the data required. The nature of the data being sought in this study and the in-depth exploration of views and experiences suited an interview-based process meaning that questionnaire and survey were quickly rejected as the data collection process.

Focus groups are a useful tool in research, particularly when there is little understood about the phenomena being investigated (Stewart and Shamdasani, 2015; Redmond and Curtis, 2009). Leung and Savithiri (2009) posited focus groups offer a richness in data unavailable through use of questionnaires or surveys. The availability of participants for direct interaction allows exploration of views at the point of data collection, with the ability to confirm and understand their meaning of responses or indeed, understanding of the questions being asked. Jayasekera (2012) however, argued that focus groups do not suit the GT method. This position is countered by the interpretivist underpinning of GT methodology and suitability of focus groups to explore poorly understood issues (Stewart and Shamdasani, 2015). Indeed, Harvey and Land (2022) noted broad agreement that focus groups are an appropriate tool for GT but go on to identify there is considerably less agreement for their use in phenomenology due to its exploration of individual experience and perspective.

Gill and Baillie (2018) contend that both focus group and single participant interviews are valid means by which to gain insight into beliefs and perspectives. They went on to say the selection of which interview process is used for research is driven by the desired outcomes. Despite the considerable logistical and organisational effort required to run focus groups and the danger of discussion heading in an unwanted direction, Tausch and Menold (2015) contend there are considerable benefits.

Working best when participants feel at ease, respected, and can give their opinions, focus groups can lead to in depth exploration of a range of complex issues (Krueger and Casey, 2015). Many of the advantages of focus group centre around interaction between group members and the moderator in the generation of in-depth qualitative data. By enabling participants to discuss their views, ideas can be developed through the sharing of views that may not happen during individual interviews (Tausch and Menold, 2015). Group interactions, exploration of points and the ability to discuss a topic to establish meaning are key aspects of the focus group method (Shamdasani 2015). The aim though is not necessarily to reach consensus, rather it gives the opportunity for participants to probe views or issues that had not been considered in the past (Redmond and Curtis, 2009). Shamdasani (2015) argued that whilst focus groups offer several benefits over individual interviews, they add that the volume and open-ended nature of the data gained can make interpretation difficult.

Given the nature of the aim of this study to understand non-technical competence across the British military nursing cohort based on experience and perspectives, focus groups have been selected in place of survey or interview of individuals. As Morgan (1998) points out, although this method has complexities, specific requirements (discussed in more detail below), and is by no means an easy route to gathering data, it has facilitated professional discussion amongst homogenous groups to garner the required data to answer the research question and meet the objectives.

4.3.2.1 Focus Group Modality and Transcription

In a post-COVID-19 era, it has become increasingly routine for meetings to be conducted through online means. Growing evidence supports this as a valid method of conducting qualitative focus group research (Schultze et al, 2023; Richard et al, 2021; Woodyatt et al, 2016). Bruggen and Willelms (2009) add that online focus groups (OFGs) do not limit the data and offer flexibility to both organisers and participants. Richard et al (2021) demonstrated that whilst the word count generated by OFGs was frequently smaller than those conducted in person, there was no impact on the detail or quality. Indeed, they showed, using thematic analysis, that OFGs offered comparable diversity of ideas, were easier to schedule, generated more succinct and focused discussion, were easier to market for participation, had a lower cost implication (through travel and transcription) and could include notes from participants. Stewart and Shamdasani (2017) noted OFGs have become an inevitable tool of technological development driven by mobile telecommunications and improved internet access. Additionally, they can increase in geographical range of participation, add to the size/number of groups, and contribute to the diversity of focus group membership. The nature of the UK Military organisation means that personnel are located across the country in an array of clinical, field and command headquarter settings with varying work patterns. To mitigate the logistical, time, and cost burdens of this research, the offer of an online option using Defence MS Teams was made to each group. This was taken

by three of the four sample groups with dates and times set to suit maximum access and attendance with minimal disruption to work commitments. Only the JHG group opted for a face to face (F2F) focus group due to the convenience of belonging to a single unit and being based in one location.

Transcription and audio-visual recording of the OFGs was carried out using the MS Teams live transcription function allowing a transcript to be available and downloaded on completion of each focus group. This offered the added security of being stored securely on MoD servers until deletion, as set out in the ethics protocol. Within each transcript there were frequent word or phrase errors. However, during anonymisation of the scripts, listening back and constant comparison, these were corrected. The ability to generate a transcript immediately after the OFGs meant minimal delay to review of the content. The final group was carried out in person resulting in the meeting being recorded using Apple voice memos. This recording was then uploaded and transcribed using the free Otter AI[23] software. Once again there were several errors which required correction and the recording was deleted on completion of the coding process. Use of available technologies enabled a quick turnaround between meeting and transcription, secure storage of the data, ease of review using both the recordings and documents simultaneously and a significantly reduced cost in both finance and time for the researcher and participants. This also

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[23] Otter.ai - Voice Meeting Notes & Real-time Transcription

helped to support the iterative process, ensuring minimisation of time gaps between focus groups. An example focus group transcript can be found at Appendix X.

4.3.2.2 Focus Group Number and Sample Size

Whilst the initial purposive and subsequent theoretical sampling are concerned with the composition of the groups and discussed later, there was the added consideration of the number of focus groups and number of participants for each to yield the necessary data. In response a lack of specific guidance on focus groups, Guest et al (2017) considered the issue of how many are necessary to provide the data required for conclusions to be drawn. Across they found that the number of focus groups required was driven by the levels of data saturation. Corbin and Strauss (2015 p.134) define as the point *"when no new concepts are emerging"*. Within the focus group approach, this gives the researcher the opportunity to halt the data collection process on the basis that nothing new being added to the development of formal or substantive theory has come up. Although a GT technique first identified by Glaser and Strauss (1967), saturation become the standard across qualitative research methods, including focus groups, for directing when no further data collection was required (Hennink et al, 2019; Guest et al, 2017). Hennink et al (2019) also argued that data saturation has now become part of the qualitative methodology lexicon but outside of GT, there is little understanding of what it means. They noted

that researchers need to clearly articulate what is meant by saturation so that it can be justified through the analysis.

Utilising the notion of saturation as the director of the number focus group, both studies concluded that 80% of themes were visible with two-three focus groups and 90% with three to six. The number of focus groups within this study was driven by their purposive composition, recruitment from four distinct clinical areas and the ability to realistically conduct them in the time set by the academic course. As busy professionals, facilitation of enough focus groups which can be attended was a further consideration (Shaha et al, 2011) To that end, conforming to this standard and the purposive criteria discussed below, an initial four focus groups were set to obtain a broad cross section of data. However, examination of the data showed saturation across the four groups in the majority aspects. This not only supported limitations through course deadlines and consideration of the purposive sampling process (detailed below) meant that this was a realistic aim.

Although used across various sectors there appears to be some consensus on the size of focus groups and the ways they are managed to yield the best results. Rosenthal (2016) argued that the nature of qualitative research means the focus is not so much on sample size to facilitate generalisability, as with quantitative research. Rather, it is forming focus groups which will enable the PI to reach saturation. This is supported by Vasileiou et al (2018) who observed that sample sizes in GT studies are

dependent on the emerging theoretical categories and therefore cannot be set a priori. Hinkes (2020) added that there remains no consensus on the size of focus groups when conducting them online. However, across the literature groups of three to fourteen focus group participants are recommended (Harvey and Land, 2022; Gill and Baillie, 2018; Redmond and Curtis, 2009) with six being identified as optimum (Tausch and Menold 2016; UK Gov, 2020). To meet this guidance, an initial target of 5-8 participants per group was set with a maximum of 12 to encourage as many perspectives to be explored as possible without groups becoming unwieldy.

4.3.2.3 Focus Group Conduct

Carried out between 11th January and 3rd May 2023, the focus groups varied in length between one hour and forty-six minutes as the longest to forty-eight minutes as the shortest (averaging seventy-seven minutes each). The length average length of each group broadly conformed to the recommendation presented by Redmond and Curtis (2009) of 60-120 minutes. Anything shorter presents the danger of not having enough information and anything longer risks physical and mental fatigue of participants. Each focus groups stimulated considerable discussion which did not seem to be affected by the online methods employed. Indeed, the use of web-based platforms aided to recruitment as the focus groups could conveniently be added to existing meetings or save the considerable time

and finance burdens associated with travel. Furthermore, use of technology facilitated quick availability of transcripts, enabled early review for coding, aided in theoretical sampling and allowed visual demonstration of theoretical saturation. The synchronous method applied for the online focus groups in this study were the closest approximation of the F2F version. As such they enabled real-time discussion with the focus groups and moderation from the PI to encourage discussion (Stewart and Shamdasani, 2017). Hinkes (2020) adds that the online functionality aids in the conduct of the interviews by allowing a more structured approach, especially when using functions within many software packages. Whilst there remains a risk of withdrawal from the data collection process, she found it more likely to occur when carrying out F2F groups.

Gill and Baillie (2018) advise conducting focus groups away from distractions and areas likely to lead to disruption. The OFG's enabled individuals to find a space away from distractions and the F2F was held in a meeting room isolated from the main hospital building. As a result, there were no interruptions to the data collection process and the online connections remained intact place throughout. Indeed, all participants in the online focus groups were engaging, respectful of the conditions, and added to the discussion.

In terms of the practical aspects of the focus group, the literature suggests a general conduct aimed at ensuring all participants are informed of the

purposes of the research, their freedom to withdraw from the process at any point, and the need to respect the opinions of all participants (UK Gov, 2020, Shaha, et al, 2011). To facilitate discussion, Gill et al (2008) advocate a strong moderation approach which seeks to guide discussion rather than taking part and be prepared to moderate views across a group which may not be palatable to other participants or the PI. To that end, the general rules set by Gill et al (2018) were applied. These included, reinforcement of confidentiality, allowing one person at a time to speak, avoidance of monopolisation of the time, and that challenging views of others is appropriate when done so without ridicule. Jones et al (2022) argued that it is incumbent on PIs to apply structure to interviews to gain the best quality data through discussion. This, however, requires researchers steer away from creating a question-and-answer session and manage interactions between participants when they may not be able to see non-verbal cues.

Across all four focus groups, participants respected the rules resulting on strong discussion of the issues. The enthusiastic involvement in the discussion facilitated a deeper exploration of the issues and enabled many of the secondary questions to be generated by the groups themselves. Indeed, on participant group thanked the PI for facilitating what they described as *"a rare opportunity for a professional discussion"*.

4.3.2.4 Focus Group Question Schedule

The question schedule needs to be carefully designed in a way to explore participant perspectives to garner the data required (Rosenthal, 2016; Gill et al, 2008). Building on Merton's (1990) work, Redman and Curtis (2009) identify four considerations which affect the construction of a question schedule for focus groups:

1.   A maximum range of issues should be considered for exploration.

2.   Use of questions to aimed to provide relevant data.

3.   Use of questions to encourage interaction between participants.

4.   Understanding of the contextual aspects of participants in the development of the questions.

Many of these issues in the development of a question schedule have a direct impact on the conduct of the focus group but the aim is to elicit qualitative data from group exploration of the issues. By working through these considerations, Redman and Curtis (2009) argued that researchers can broadly frame the question schedule and conduct to facilitate in-depth exploration of the topic.

Rosenthal (2016) comments that the question set should consider more specifically what is being explored. In meeting the aims of this study there was a need to explore experiences, perspectives, and opinions rather than knowledge or emotions meaning the specific phrasing of questions was required. This was then be reflected in the question structure which sought to be open ended, neutral, singular, and understandable (Gill et al, 2008). This is further refined to aid the process of the focus group to reflect movement from general to more specific questions and an order relative to the research priorities (Stewart and Shandasami, 2015). Kreuger's (1998) perspective was questions were required to explore the issues but come under 5 categories outlined in table 9.

Table 9. Focus group question types (Kreuger, 1998).

Question type	Purpose
Opening	To enable participants to be introduced and feel connected.
Introductory	Questions aimed at opening the topics.
Transition	Enable the smooth movement from one issue to another.
Key	Allow exploration of the central issues of the study.
Ending	Serve as an 'insurance' process aiding researched to identify where to place emphasis on responses and facilitate closure to discussion topics.

Application of these approaches to the initial question schedule for this study enabled a spine of questions to be formulated to answer the question. Starting with broad questions around competence and experience of it on operations or in the UK created the backdrop for more specific questions through the mid-part of the groups. Further exploratory questions were then applied as the issues were discussed by each focus groups to ensure participant perspectives were fully understood by the PI as advocated by Glaser (2007).

Rather than, as Krueger and Casey (2015) advocate, completing all the focus groups before analysis, GT demands the researcher commence analysis at the start of data collection. This iterative approach enables the researcher to review the outcomes of the first focus group and adjust the question schedule, if necessary for the second group. Any changes to either the group composition or question schedule are done so on the emergence of new categories or themes. This method enabled thorough exploration of the themes raised, coding of the data and review of the question schedule to be undertaken prior to the start of the next focus group. The iterative interaction with the data enabled the core themes to emerge as well as giving the opportunity to validate codes from previous groups or explore issues which had not been discussed in as much detail. Adjustment of the question schedule between focus groups also helped to confirm saturation of key points identified by the participants. This approach was applied to this investigation meaning that coding of the first focus was

complete before moving onto the next group with the adjusted question

schedule found at Appendix VII.

4.3.3 Sampling, Recruitment, and Participation

Corbin and Strauss (2015) highlight sampling as one of the major

considerations for anyone using the GT method. The requirement to

reconcile conventional sampling with the nuances of theoretical sampling

remains a challenge but the outcome enables the emergence of the theory

to lead the process (Corbin and Strauss, 2015; Glaser, 1978; Glaser and

Strauss, 1967). In this iterative and cumulative process of data collection,

analysis starts at the point at which it is first collected and continues not

only into the next stage, but throughout the entire process. Bryant (2009

p.22) defined *"data-gathering-cum-analysis"* as the core concept of

theoretical sampling. The investigator can explore and develop their initial

concepts by generating further questions based on the findings within the

data collected. This cyclical process continues until it matures, revealing no

new information, reaching the point of saturation. Indeed, this process can

be undertaken as many times as necessary to facilitate a full investigation

(Yu and Smith, 2021). In this respect, theoretical sampling is distinct from

the more conventional selective, random or representational examples of

sampling. Furthermore, theoretical sampling not only relates to the

selection of participants but enables refinement and development of the

question set to suit the investigation. Having the flexibility to adjust the

course of the research on this basis enables the investigator to drive into issues as they arise, adding value to the formal and substantive theoretical outcomes. Furthermore, theoretical sampling can be a useful tool in maintaining researcher focus and avoidance of becoming overwhelmed by the data gathering and analysis processes (Charmaz et al, 2018). Glaser's approach to theoretical sampling though creates an inherent problem in where to start. His assertion of sampling based on a general sociological perspective within a substantive area which is then directed by the themes emerging from constant comparison (discussed later) does not necessarily give a relevant starting point, even within a specific setting. Additionally, the requirement to identify and gain access to a group and nature of the investigation is often a pre-requisite for modern research. This is the point at which a purposive sample is needed (Chun Tie et al, 2019; McCann and Clark, 2003). In line with common institutional and ethical requirements there was the requirement for this research to identify at least a starting point. Corbin and Strauss (2015) note the requirement for a decision on the identified population and setting gives a suitable starting point. These initial sample selections are made based on being most likely to allow discovery of new theory or concepts which was informed by researcher experience and to a lesser degree the existing research. This later develops into theoretical sampling driven by the likelihood of being able to differentiate, elaborate or validate the emerging theories (Vollstedt and Rezat, 2019; Corbin and Strauss, 2015). Bryant (2009) goes on to argue that it is the researcher, and their understanding which provides the

key link in the chain between theoretical sensitivity and theoretical sampling.

However, sampling methods contribute to a significant level of disagreement within the GT world. Despite further decisions about participants, samples and the nature of the information then being flexible, Glaser (1978) argued that such an approach endangers the theoretical process. He argued that any 'selective sampling', no matter how reasonable or commonly used within qualitative methods, is not theoretical. In applying this, the researcher is restricting the process, risks using the sample to confirm pre-existing thoughts or hypotheses and jeopardises the GT purity of the outcome. Charmaz and Belgrave (2018) added that formulaic institutional processes can inhibit the spirit of theoretical sampling which some see as defining the GT method. Indeed, Corbin and Strauss (2015) acknowledge the functional requirements such as research or ethical committees, distances or other practical issues can impinge in the process of theoretical sampling. They go on to suggest expanding the initial sample sizes or building a flexible time scale for data collection to ensure that such practical implications are addressed whilst giving the researcher flexibility within the proposal. Application of theoretical sampling and saturation may well lead to the researcher not requiring access to all the participants initially suggested. Key to their solutioning is the notion of remaining flexible throughout the entire process.

A key consideration existed in ensuring those who had deployed were included in the groups. The dwindling number of operationally experienced clinical nurses within the Army requires early identification of a purposive sample most likely to give the data necessary to identify core concepts and the related overall theory. To that end, on gaining ethical approval, the recruitment process was commenced to aid in answering the research question. Emails were sent to those listed below requesting that invitations to take part in the study were distributed within the areas of responsibility (AORs). This invitation included a letter from the researcher inviting participation, the MODREC application to give background to the study, the MODREC approval letter and links to the electronic consent form. An example can be found in Appendix VIII.

1.   DSA Chairperson – Chief Nursing Officer (CNO) Defence.

2.   SNA Chairperson – Army SO1 Education and Research

3.   AMSTC – SO1 Clinical 2nd Medical Brigade (2MEDX)

4.   JHG Southeast (Frimley Park) – OC Nursing (OCN), Deputy OC
      Nursing (DOCN)

Each of these kindly distributed to their areas of responsibility (AOR) to enable recruitment of sufficient numbers to each of the focus groups. This

resulted in the establishment of four purposive focus groups, outlined in

table 10.

Table 10. Focus group composition and size.

Heading	Description	Focus Group Size
Defence Specialist Advisors (DSAs)	Senior experienced nurses and AHPs from across the DMS who advise the Surgeon General on care and management of patients in the Tri-Service setting	5
Army Single Service Specialist Nurse Advisors (SNAs)	Army nurses with appropriate levels of experience to advise the chief nursing officer and Army Medical Services (AMS) on the care of military patients within the deployed space.	5
Army Medical Services Training Centre (AMSTC)	Training centre based in York using an array of techniques to prepare and assess deploying clinical teams.	5
Joint Hospital Group (JHG) Clinicians	Clinical nurses working withing Joint Hospital Group Southeast	11
Total number of participants		26

Although there was a requirement to identify contributing groups within the substantive area of investigation, the composition of the groups in terms of gender, clinical speciality, rank, length of service, or specific operational and deployed experience was not defined. Participants from a wide spectrum of these categories were encouraged to take part to facilitate in-depth discussion and exploration of issues across the British Military nursing cohort. Without this, there is the risk of not being able to explore the substantive issues with those who have experience of them.

Both advisor groups and that from AMSTC were comprised of clinicians who had deployed to operations including those in the Balkans, Afghanistan, Sierra Leone, Iraq, and Sudan. The least operationally experienced group was from JHG which also included those new to the DMS. This was then supported by a theoretical sampling process which enabled wider, flexible explorations of the core concepts as they emerge throughout the data collection. As the recruitment process developed and invitations for participation were distributed, it became apparent that many of the issues being explored were not unique to Regular Serving Military nurses. Therefore, based on application of theoretical sampling, the initial purposive sample was expanded from Regular serving nurses only to include:

1. Allied Health Professionals including physiotherapists, pharmacists, operating department practitioners (ODPs) and health care assistants (HCAs)

2. Military Primary Care Nurses.

3. Nurses from the Army Reserve.

The expansion of groups to include wider professional groups enabled a broader perspective to be constructed based on the wide organisational and operational experience of the participants. Although there had been addition of a small number (5) of allied health professionals to the sample, medical doctors were excluded from the sampling process to reflect the NTC views of those for whom the theoretical outcomes would directly affect. Additional constraints in time, logistics and coding of more focus groups were further factors in their exclusion. However, as this research had been authorised by the DMSRSG, there is a need to present findings on completion, meaning any extension or application into the medial domain could be explored at a later stage.

4.3.4 Data Analysis and Coding

A source of acrimonious division between the proponents of GT has been the methods applied to data analysis and coding. Whilst Glaser (1992;

1978) does advocate some element of coding, he does so in the broadest
of terms for categories and properties with theoretical codes appearing in
response to the data. In contrast, Corbin and Strauss take a more
structured approach to coding the data based on a process of open, axial
and selective coding. In using a *'paradigm model'* (Corbin and Strauss,
2015 p. 167) they were able to identify links between the codes and the
context in which they were working. The codes or concepts are then
arranged into categories through which the emerging theory could be
identified and refined. Glaser (1978) viewed this very much as an assault to
the core freedoms within GT. He argued that a structured coding process
forced the data into preconceived categories and as such did not allow
natural emergence of the theory. He even went so far to suggest that
Corbin and Strauss had misconceived the central ideas and what they had
developed was not GT. Some Glaserian advocates argued that Corbin and
Strauss had eroded or diluted the pure GT method whereas their
supporters saw the new method as a natural evolution of the original
process (Hsiao and Boore, 2008). Charmaz's (2006) later constructivist
approach equally takes a dual-stage approach to coding but does so with
the researcher as a reciprocal element to the analysis. Once again coding
is key to the process. Table 11, adapted from Hsiao and Boore (2008)
compares the key data analysis steps between the three leading GT
models.

Corbin and Strauss (2015) note that their 3 stages of coding (open, axial, and selective) are not discrete, rather they are interrelated with each stage inter-woven with the last and the next. This enables the research to move back and forth between each stage to develop and refine the codes which emerging from the data. Glaser's 1978 position was based on two aspects of coding: substantive and theoretical. Substantive codes identify the substance of the investigation whereas theoretical codes provide a process through which the substantive codes relate to one another. Transition from one to the other was supported by understanding the mechanics behind the emergence of the codes and associated theories. To aid this Glaser identified 18 possible relational codes such as the 6 C's (cause, context, condition, consequence, covariance, and contingency) although notes these as possibilities rather than Glaser (1992) later elaborated noting that the process element could not take place until the data had emerged.

Table 11. Analytical coding steps with GT.

Step	Glaser	Corbin and Strauss	Charmaz
1	**Substantive Coding:** Open coding Selective coding	**Open Coding:** Line by line analysis of the entire document such as record or transcript.	**Initial Coding:** Line by line or *in vivo* coding.

	Detailing the process behind identifying the codes.		Identifying shorted coding phrases. Developing terms into concepts using constant comparison and asking questions.
2	**Theoretical coding:** Grounded integration Application of possible coding families.	**Axial Coding:** Application of the paradigm model to establish: General conditions Context Phenomena Intervening conditions Actions/interactions Consequences	**Focused Coding:** Identifying categories and subcategories. Linking the categories. Identifying the core category.
3		**Selective coding:**	

		Identifying the core categories to develop and refine the final theory.	

The selection of the Straussian method gave a handrail for data analysis through a coding structure. The codes emerge from the data, rather than, as Glaser (1992) describes it, forcing the theory out or fitting into pre-determined categories. Therefore, this approach allows the key themes to be identified and linked. In doing so, they are then applied in generation of formal theory for overarching elements and substantive theory for specific or contextual concepts. Application of the Straussian approach though does not diminish the need for objectivity. In aligning with this method, the need for a reflexive approach throughout is necessary to mitigate for bias in both the analysis and discovery of the final theoretical outcomes. However, the Straussian approach has afforded this researcher an insight into the existing work to justify the requirement for the study. Additionally, it has facilitated a purposive sampling starting point and a structured means to refine and code emerging concepts in a logical manner to articulate the formal and substantive theories.

Central to all approaches of data analysis in the GT method is the idea of constant comparison. Corbin and Strauss (2015) describe this as a process of checks and balances within the analytical process that enables data to

be checked for similarities, differences, and consistency. The outcome enables the researcher to conceptualise and give meaning to the emerging themes. This process is based on the continuous, iterative coding and recording of phenomena (Corbin and Strauss, 1967). Constant comparison requires emersion in the data and for the investigator to be suitably theoretically sensitive to identify and cross check the emerging codes (Thistoll et al, 2015). The resulting themes or incidents are identified and coded. Codes can then be compared with each other to form categories which are equally comparable. This process continues throughout the data collection period, enabling the researcher to theoretically sample based on the findings. This gives the GT method the conceptual depth which stands it out from other descriptive studies. Chun Tie et al (2019) note that it is a common mistake for novice GT researchers to undertake this once they have all the data. This though undermines the process resulting in an approach which does not confirm to the generally accepted processes of GT. Whilst constant comparison may seem a straightforward process, Yu and Smith (2021) identify the lack of specific guidance on how this can be achieved. They argued that the absence of its legitimate use could have a significant impact on the development of substantive theory and could even endanger the overarching GT method.

A key aspect to the data collection and analysis processes is the use of memos. Corbin and Strauss (2015) point out that field notes are an important element, but memos go beyond serving as a memory jog for the

GT researcher while diagrams help to visualise the emerging concepts. Memos are *"theoretical notes about the data and the conceptual connections between categories"* (Glaser and Holton, 2004 p.17). Memos written throughout the collection and evaluation of the data serve to evidence the emerging substantive theories and aid in the coding process (Glaser 2009. Use of these memos can facilitate movement of the concepts away from being less context dependent whilst supporting the researcher in their reflexivity (Urquhart, 2019; Thornberg, 2012). Memos were generated throughout the focus groups, subsequent constant comparison and coding process, and literature review. As the memos were written and explored, further concepts and codes emerged which aided in the development and refinement of diagrams. An example of the memos taken from the focus groups can be seen in Appendix IX.

To aid the data analysis process, transcripts from the focus groups were uploaded into NVivo. This coding software package also helped to facilitate memoing, identification of coding categories and diagrammatic representation of both formal and substantive theoretical outcomes. Bazeley and Jackson (2013) cite concerns such as distancing researchers from the data or the risk of mechanisation of the process akin to positivism, exist in use of computer-based analysis. However, they go on to note that such packages give researchers both closeness required for familiarity and the distance necessary for abstraction when using qualitative data.

4.3.5 Reflexivity

In discussion of GT research, McGhee et al (2007) noted a requirement for the investigator to be aware of their own role in both the data collection and analysis. Without this insight, there is a risk of prior understanding and knowledge adversely affecting perception of the data, and ultimately the emerging theory. This can be avoided by being reflexive. Neill (2006) described reflexivity as a new phenomenon, relative to the origins of GT, which has become a growing part of the researcher's skill set. Although there appears to be little consensus on a meaning, the literature supports that reflexivity is a process more complex than reflection. Despite numerous definitions, common attributes centre around understanding the limitations of the process being used, understanding one's own biases, application of critical appraisal throughout and, acknowledgement of the context in which the research is conducted (Engward and Davies, 2015; Finlay, 2002). Hammond and Wellington (2013) argue that reflexivity is deeper than examination of researcher conduct, as it considers the positionality of both the researcher and the research. Indeed, Neill (2006) went on to note that if reflection sits at one end of a spectrum, then reflexivity sits at the other. This is based on the premise of reflection as a means of looking back to gain insight and development. Whereas reflexivity is a dynamic process during which the researcher actively scrutinises the role of their own perspectives and how these can impact the research outcomes (Engward and Davies, 2015).

The large amount of existing discourse around reflexivity in qualitative research means that it can be difficult to comprehend how it can be applied in practice. Although there are varying approaches to reflexivity, Subramani (2019) concluded that all are based around acknowledgement of the researchers' agenda and factors they see as crucial to the research outcome. Engward and Davis (2015) discussed reflexivity in terms of giving transparency to the decision-making process in qualitative research. On various levels it enables the researcher to explore their own position and to acknowledge how this can influence their epistemological view and the emergence of any new theory. Finlay (2002) described this as being explicitly self-aware during analysis. Within the context of theoretical sensitivity in GT, it allows the researcher to understand the impact of existing knowledge, preconceptions and ontological positions on the study being carried out. Alvesson and Skoldberg (2018) described reflexive research as a combination of careful interpretation and multi-layered reflection. Careful interpretation requires understanding of context, existing knowledge of the subject being investigated, and the language used in the participant's narrative. In contrast, the reflective element shifts the process onto the researcher and challenges them to critique themselves during interpretation of the data. Using a systematic approach, they define this as *'interpretation of the interpretation'* (Alvesson and Skoldberg, 2018, p.11) as the lynchpin of reflexivity in research. The shift towards a more reflexive

approach in Straussian GT resulted in Corbin and Strauss softening their position of rigid adherence to GT structure (Charmaz, 2013).

Reflexivity needs to become an intrinsic part of the qualitative research process, duly made part of the record, and explored through constant comparison (Davis, 2020; Neill, 2006). Acknowledging the role of the researcher in the interpretive process sits at the centre of reflexivity. However, despite this, there are limitations in the use of reflexivity. In describing what he termed reflective paralysis, Glaser (2001) warns of the over-analysis associated with reflexivity as being a destructive influence on free thinking. Although not fully rejecting the requirement to understand the role of the researcher, he argued that the introspective drive to justify the outcome should not stifle the creative processes necessary to identify the emerging theory. Cutcliffe (2003) goes further, arguing that it is impossible to be fully reflexive as one can never fully understand themselves. He went on to add further influence can come from the phenomena or experience being investigated through empathy or emotional transference from those involved. This endangers the independent position of the investigator by compromising both theoretical sensitivity and subsequent theoretical sampling. As a result, he asserts that at best, reflexivity can only be regarded as or partial or an incomplete process.

Grounded theory aims to produce a theory grounded in the data collected. This contrasts with either description or conceptual ordering (Corbin and Strauss, 2015). They go onto note that theory is the systematic

development and ordering of categories into a theoretical framework based on their properties and relationships. This differs from description, which is subject to selection influenced, often sub-consciously, by what is seen and heard by the researcher. Consequently, many descriptions can convey a view which reflects a prejudice or bias without the researcher being aware. Conceptual ordering allows information to be sifted into properties and dimensions and is the next rung of the ladder in terms of movement towards theorisation. However, its basis on descriptive material continues to risk a lack of objectivity. Whilst any emerging theory in this GT approach has been through a rigorous process, there is the continued requirement to account for the reflexive approach applies. In the case of this study, the Alvesson and Skoldberg (2018) model has been utilised.

Alvesson and Skoldberg (2018) assert that reflexivity is not about the self-absorbed reflections of the researcher and their journey. Rather is an opportunity to take a structured approach to understand the motivations and therefore the underlying theoretical pre-dispositions and possible biases to the research. In their approach, a stepped pathway allows the researcher to explore key aspects within their own process. This is based on four core elements requiring researchers to consider their both their own approaches how they manage external influences. Each of these aspects are addressed below:

Data collection method and researcher influence.

Data was collected using semi-structured focus group interviews, as detailed in section 4.2 and supported by collection of field notes and memos. To allow this process to occur naturally, a balanced researcher engagement with the participants was utilised to seek the required information without being either under-involved or dominating the data collection process. Whilst the former risks participants not understanding the questions or indeed the research purpose the latter results in impression of researcher views onto the data. Furthermore, the military rank structure can act as a means of social control, influencing what participants express in the interviews. The PI became rank agnostic throughout the data collection, making no referral to own rank. This was reinforced by absence of uniform worn by the PI during the OFGs and the F2F group.

This researcher sought the middle-ground using discourse to garner wide perspectives. This started with an irrelevant 'practice' question (what is your favourite cake?) to allow all participants an opportunity to warm to the situation. This then led to broad questions to scope understanding before exploring specific views. Throughout, confirmatory follow-up questions were used to ensure understanding of the response. When listening to the audio recordings, this confirmatory process was checked to ensure participants were not led to researcher preconceived ideas. As GT allows a concurrent

process of data collection and analysis, this process could be checked and adjusted, as required, at each interview stage. Although the data collection and interpretation process was conducted by the PI as a single researcher, regular discussions were held with supervisors. This helped with mitigating researcher influence, particularly within the interpretive aspects.

Researcher interpretation of data and pre-existing perspectives.

The applied GT approach required the researcher to provide more than reflection on anecdotal accounts. In doing so this the enables, trends, disparities, and gaps to be identified and a theory to emerge. To enable this as early as possible, the first three interviews were automatically transcribed using MS Teams and reviewed within 48 hours. The last was converted into an audio file and uploaded to Otter.AI in the same time frame. As these were AI led transcriptions, they were all verbatim and review involved repeat listening with correction of content to ensure correct capture of data. As the group recordings were read and watched repeatedly, field notes helped to ensure that no points were missed and understanding of each participant was considered on its own merits. In doing so a picture of participant perspective, both individually and collectively, emerged without influence of the PI's position.

Although the coding approach throughout SGT has influence set in experience and knowledge of the subject matter (Corbin and Strauss,

2015), the epistemological and ontological position of the researcher helped to aid the interpretive process. This was founded on the motivation to explore the views of others rather than confirm the opinions of the PI. Furthermore, although, no third party fully reviewed each interview, discussion with supervisors throughout allowed sufficient review to ensure minimisation of bias. The confirmatory questions during data collection and consideration during review, helped to ensure researcher perspective did not over emphasise points to support their own thoughts and attention was paid to reflect the level of importance to the participant. There was no respondent validation carried out during this study although this would be a further consideration to reduce interpretation errors (Engward and Davies, 2015).

Political and ideological influences on collection, analysis, use, and reporting of the data.

The researcher has professional experience of the phenomena being investigated. As set out in chapter 2, this was indeed the motivation to undertake this study. It is difficult to surmise the impact that such insight has on the investigation method and interpretation of data. However, this was mitigated by transparency in decision making and the inclusion of a background information statement in the thesis narrative showing researcher motivation.

During data collection, several participants were known to the researcher with others as professional peers and colleagues. This meant consideration on reducing the effect of previous interaction and relationships in the discussion. This was achieved through the setting of a question schedule based on previous analysis. Professional insight contributed to the setting for the first group and allowed deeper exploration of the answers as the focus groups progressed.

Although well established as a military nursing professional, the research was undertaken as part of doctoral study. This meant there may have been some underlying pressure to prove worthy of such a level of study. Honest explanation of the project, motivations and personal drivers for the study have helped to establish a researcher position and rapport with participants. The approval of this research through the both the ASAC and DMSRSG committees served to validate the need for the research and support unit involvement. However, this could have proven a political risk based in the perception of providing outcomes these committees wanted or potential ignoring of outcomes. Throughout the study, data collection and interpretation were unfettered by any personnel. Furthermore, open discussion of emerging findings and themes, with committee members, supervisors, and the wider military nursing community, at various events demonstrated a supportive environment in which the methods were valued as much as the findings.

Representation of authority through language and data support outcomes.

The presentation of the findings and the analysis through use of specific language which is often reflective of the purpose and environment in which the study is undertaken. Use of the GT in this study aimed to explore the phenomena and allow a theoretical approach to emerge. Wider 'communicative generalisation' of findings to other areas is down to the reader (Smaling, 2003) but is supported by the development of a formal theory from the substantive outcome.

The GT methodological approach to this study, looks to explore the phenomena of NTC within the military context although has some clear application beyond. The reporting narrative has been undertaken with codes supported by justifying statements and deeper exploration of the literature. Adding further to communicative generalisation, the report has been written to reflect both the military and nursing dimensions. Being open and honest in data collection and analysis, it avoids the unidimensional risks described by Alvesson and Skoldberg (2018). Presentation of the data in methods and language suitable to the academic and wider national and international military nursing communities further helps to balance dissemination of findings in means understandable to both, mitigating undue authority influence on emerging theory.

4.3.6 Method Conclusion

Glaser and Strauss's (1967) shift away from the positivist paradigm has paved the way for emotive and complicated issues to be explored without the restrictive use of numbers or grand theory testing. By providing a process for qualitative research to continue to add value to an array of specialist bodies of knowledge, they have fuelled theoretical development within the qualitative world. The creation of an orchestrated and organised approach to researching complicated questions has been well adopted within nursing and the social sciences. Generating the language necessary to understand and develop solutions, to what can be complex problems, has become something of a mainstay of GT. Reflecting on the very nature of the problems being investigated, it is little wonder that variances of GT have emerged based on how different people view and interact with the world around them. GT serves as the ideal vehicle for this study, enabling exploration of an area in which little substantial information exists but one which has a direct impact on how nursing care is delivered by a specific group in a variety of settings.

Although any of the three main branches of GT could have been applied, the personal decision to utilise the Straussian approach is founded on the robust and structured methodological process it provides which sits well with the epistemological and ontological position of the PI. This in turn has enabled visualisation of the problem through identification of codes sourced

from the data from focus groups. Whilst those in the Glasserian camp may assert that this forces the theory out rather than allowing natural emergence, this creates a process by which formal and substantive theories can be articulated and presented in an organised way. Opposingly, constructivist proponents would argue that such an approach fails to add the researcher view which this PI actively sought to avoid. The aim was to provide an unbiased view of how others saw the problem and its possible solutions. This research explores those views but understands that personal experiences and perceptions are an inevitable aspect of the interpretive process. Application of a reflexive approach tempers the impact this has, allowing emergence of theories which reflect the NTC requirements of military nurses and their implications for practice.

CHAPTER 5 – Findings

5.1 Introduction

This chapter presents the findings of this GT investigation. Application of Straussian GT coding, founded on constant comparison, was applied throughout the data analysis phase. The resulting selective codes served to identify the core category and its associated properties. Starting with an overview of the core category and the associated properties, this chapter presents the key themes and codes that emerged throughout the analysis stage. In justifying how each focus group added to the emergence of the theoretical outcomes, it gives in depth analysis showing how the core category is linked to the associated properties. Through elaboration and statements of relationship, this chapter will demonstrate how the formal and substantive theories have emerged to form a structured approach to non-technical competence for military nurses.

5.2 Overview of Findings

An initial line by line approach was taken to each of the transcripts whilst listening back to the original recordings. Not only did this enable computer transcription errors to be corrected, but in combination with memos and field notes, also allowed the researcher to highlight points of discussion and key phrases. The transcripts were then exported into NVivo where highlighted excerpts could be aligned to the codes having emerged from the analysis. Use of the SGT methodology enabled analysis and coding to

start from the first interview continuing through a staged approach between

each focus group. This iterative process facilitated the emergence of codes

and shaped the application of theoretical sampling. Furthermore, constant

comparison between the focus groups supported the demonstration of

saturation as the frequency of codes increased. This process revealed 76

open codes which were then organised under eight axial codes. From

these, three selective codes emerged, firmly grounded in the data (Table

12).

Table 12. Consolidated Coding List.

Selective Code	Axial Code	Open Code
Conditions	Non-Deployed UK	Development Opportunities
		Inconsistent Teams
		Different locations for clinical practice
		NHS Pressures
		Operational Preparation
		Lack of senior opportunities
		Siloed mentality
		Shared skills
		Team dynamics
		Inconsistent approaches
		Placement Quality
		General Points
	Deployed Operations	Assumed competence
		Living Conditions
		Environment
		Deployment pressures
		Exercises
		Experiences
		Common purpose
		Operational care standards
		Sacrifice
		Responsibilities
		General Points

Construct	General Competence		
	General Competence	Confidence	
		Context	
		Credibility	
		Currency	
		Efficiency and Safety	
		Experience	
		Knowledge	
		Professional	
		Role Orientation	
		Satisfactory	
		Task Orientation	
		Trust	
	Non-technical Competence	**Round 2**	**Round 1**
		Communication	Negotiation/diplomacy
			Team working
			How: Active listening Verbal, written
			Body language
			Situation
			Resilience
			Purpose
		Leadership	Invested in the team
			Mentorship and support.
			Listening to the team.
			Appropriate style
			Decision making
			Role modelling
			Empowerment
			Knowing team strengths and weaknesses
			Team working
			Human factors
			Courage
			Trust
		Emotional Intelligence	Empathy
			Adaptability
			Compassion
			Understanding
			Self-awareness
	General Characteristics	Resilience	
		Credibility	
		Courage	
		Humility	

		Situational Awareness
		Adaptability
Conduct	Metrics	Assessment
		DONC/Frameworks
		Feedback
		Job descriptions
		Limitations
		Standards
		Subjectivity
		Training and Assessment
	Exposure	Expectations
		Trust
		Opportunity

Across all the selective codes identified, there was also the emergence of
context as a core code. Throughout each area, the contextual application of
NTC driven by environment or situation, affected the views of how
competence was perceived, applied, and measured. This 'golden thread'
running through all codes will be discussed in relation to each throughout
this chapter, which is split according to each selective code and their
associated axial and open codes.

5.3 Conditions

Discussion around the areas in which British military nurses practice was a
source of considerable debate across all four focus groups. Comprised
largely of the *who, when* and *where* of competence use, the conditions in
which British military nurses worked drove much of the discourse and
informed views on both the construct and conduct of competence. The
challenges associated with reconciling work in the differing clinical
environments was typified by P020 who observed:

"…again, it depends on your environment where we take advantage of all the Gucci [cool or awesome] *stuff in the NHS. And so, when you go out* [on deployed operations]*, we don't have it, we have to adapt, we have to work with what we have…"*

In coding terms, analysis identified 23 open codes specific to conditions noted in table x. These fell broadly into two axial coding groups: non-deployed UK and deployed operations. These aspects represent the two different clinical roles in which British military nurses are employed for their patient facing duties. Figure 3 demonstrates how proportionately the non-deployed UK and Operational roles generated codes. As an overview, it is clear to see the non-deployed roles proportionately generated the greatest number of codes. This is reflective of the current limited operational pace, where opportunities for deployment into nursing roles have diminished following the end of recent large-scale conflicts such as those in Afghanistan. Additionally, discussion underlying these selective codes was focused on the clinical nursing aspects rather than other roles, such as staff and command, which are rarely clinical facing. Each of these will be discussed in turn.

Figure 2. NVivo Coding Wheel for Context Axial Coding.
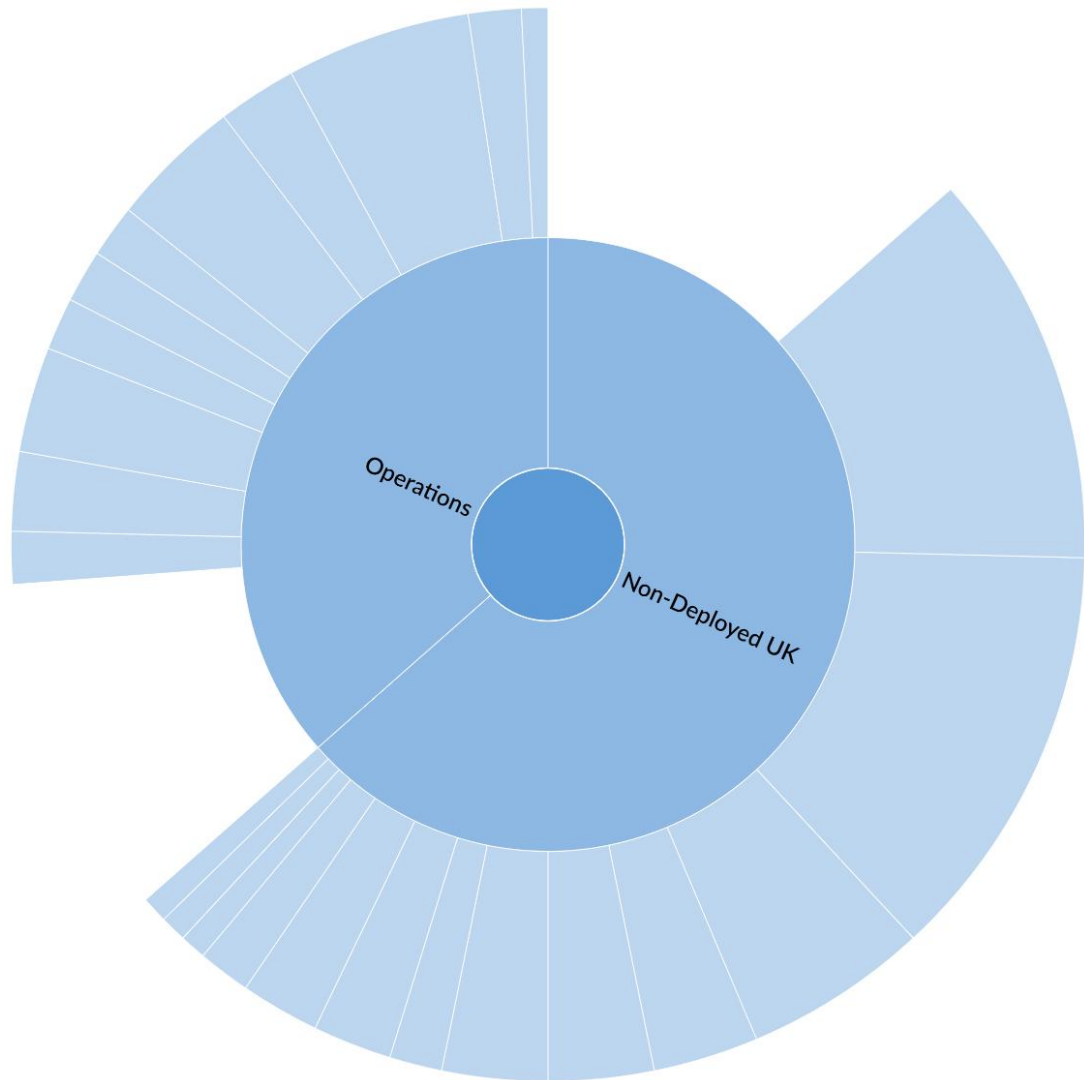
5.3.1 Non-deployed UK

The non-deployed UK settings for practice are largely focused on the roles

played by British military nurses within the NHS. All participants were either

in NHS roles or had substantial experience of working in them. However, a further consideration was the role played across the country during the Covid-19 pandemic. Nurses from a range of specialities were deployed to support the NHS following MACA requests. Despite working in the NHS, discussion arising from this situation was considered an operational code as nurses were deployed under military conditions.

The NHS proved to be a source of angst with frustrations expressed across all four focus groups. As the environment in which personnel clinically prepare for operations and maintain competence, various issues were raised but the most frequent was the lack of opportunity for professional development within the organisation. Those with operational experience argued that this frustration was rooted in not only feeling underprepared for the operational setting but being unable to use their operational experience to maximum effect within the civilian sector. Much of this centred on the lack of access to opportunities to develop NTC stemming from the NHS banding applied to military nurses. There was frequent discussion around the failure of the NHS organisations to recognise what experienced military nurses bought to the clinical setting. This was more apparent in participants with deployed military experience involved in direct clinical delivery. Participants were further exasperated by their NHS roles and duties not reflecting their nursing experience or the responsibilities of their military positions. One of the largest frustrations reflected in these statements

stems from being viewed by NHS clinicians as *"only"* band 5 nurses, which they felt failed to recognise the experience and skills they held.

> **P011: "**… there was me as the HOD [head of department] and then I had three other staff sergeants who were able to do other military stuff, but from a nurse point of view they were seen as band fives, which they probably weren't, cause they've been about as long a time as I have, which is forever!"*

> **P017:** *"as a HOD [military head of department] you're probably a [band] seven but that is in the military eyes, so but yeah, as the, as the NHS you're about a five."*

Consequently, participants believed opportunities for professional development within the NHS were restricted to the band they were contracted to rather than being representative of their clinical knowledge, skills, or experience. This was viewed across the groups as firstly being based in NHS staff not understanding why military staff were placed in the NHS and secondly as not comprehending well as the possible effects this may have on deployed teams:

> **P009: "…***People working within the NHS are not getting ready for deployment. They're not in the high-level band 7 meetings, where they talk about bed management, patient flow, etcetera, etcetera. And then when they get*

deployed in a field hospital exercise and they're heads of

departments, they're not sure what they should be

doing…They just haven't got it because they don't do it,

because even though you could be a nursing officer in

the JHG, you'd be employed at a band 5 staff nurse to

look after one patient in critical care or running about any

ED or ward doing the sort of bog standard basic jobs…"

The lack of opportunity to develop these skills was seen by many as having a detrimental impact on their ability to practice within the operational space where there is an expectation for nurses to play a complex role in the delivery of care. The lack of exposure to wider, more senior roles negatively influencing operational performance and individual ability to cope with the deployed setting.

***P003:** I personally have worked with people who are*

actually probably much more competent in the NHS

setting. But when I deploy with them, they're actually

quite a disaster…

The operational impact of not having the required experience or exposure to NTC was a major theme, particularly amongst those working in AMSTC. They reported that the high-fidelity training environment enabled them to see how teams interacted and used NTC in achieving the set mission. They identified that shift leaders lacked core management skills and were unable

to recognise or anticipate issues. They attributed these challenges to the lack of 'professional stretch' and low exposure to team or area management experience skills within the NHS. This was supported further by P014 who raised concerns that movement into NHS areas, where practice was based solely on band 5 placement, resulted in 'skill fade' due to lack of opportunities to practice skills they have used on operations:

> *P014: "…and I think we're getting a lot of skill fade from people going in [to NHS roles], especially in things like critical care…"*

Others viewed their role in the NHS as not translating well into the operational setting, particularly in relation to how the NHS banding does not equate to the responsibilities they may have on operations. This view persisted across all groups leading to questions over the suitability of current placements in the NHS for military nurses to adequately prepare for deployments.

> *P01: "I strongly feel that the NHS is not the right training ground for us. I don't I think it gives us a big chunk. We're probably about 80% there of what we need with particularly those clinical technical skills. But I personally feel that there's a significant chunk missing from what we get from the NHS."*

Further frustration was evident from participant observations of those who had left military service for NHS employment. They noted *"they left and literally walked into a band seven/band eight job"* and *"now a band 7 and she left us a lance corporal"*. Despite limitations in practice imposed on them in the clinical setting as military nurses, they felt the NHS was quick to take advantage of the breadth of nursing experience and expertise when recruiting nurses with military experience into senior positions.

Following widespread concern over the level of exposure to NTC, participants were asked why they thought this might be the case. Responses included a lack of understanding of the operational requirements of military nurses and dogmatic adherence to their understanding of the contract between the DMS and the NHS relating to the banding they had been given. A further key theme to emerge was military nurse posting cycles resulting turbulence in the military team and spending less time delivering a clinical role in the NHS than their civilian counterparts.

> **P011: "***I think that an element of that is the pure turnover because the JHG that we're in are so used to us turning over staff every 2-3 years by the time they've invested in the first group, they then got to reinvest in the next group and the next group and the next group when we're going out to external hospitals…*

This was compounded further by the perceived misunderstanding of NHS managers, that although military nurses would not necessarily stay in that hospital, they were likely to go to an NHS hospital as a next posting or return to the NHS following time within a military setting.

> *P012: "…From a military person working within the NHS*
> *scope of practice, in the current trust that I'm in, it's more*
> *a case of because your longevity within that trust is very*
> *minimal and they like to invest into their own people that*
> *are gonna be with them longer. So they give them more*
> *trust…more than they do the military"*

One respondent commented that the length of the local NHS training required to undertake a coordination and leadership role was prohibitive because of wider military demands on time and posting cycles:

> *P017: "…but there's a course they wanted me to do*
> *before they'd let me even go near a nurse in charge*
> *shadow…but it was a yearlong as well…you can do it*
> *because you get posted and all this other stuff."*

The movement between clinical units, all based within the NHS, proved a key issue to participants. They lamented the lack of continuity between host trusts, where British military nurses felt the need to *"reset and almost have to prove themselves again…" (P012).* This lack of continuity between the

JHG units influenced further by the posting cycles that unit commanders are also subject to. Participants argued that opportunities for development varied considerably between each unit. In many cases, the level of opportunity afforded to personnel was driven by the command personalities in place at the time (noting they are also subject to the posting cycle) and the relationship they had with the NHS management team in the hospital they worked.

> *P011: "I think it's very JHG unit dependent. What you can do in one JHG you definitely can't do in a different one. And it's also very personality driven. So, what one OCN can achieve to be able to develop for the guys underneath them, when you change over to another OCN they have then got to develop that trust again with the NHS Trust…"*

> *P014: "I would agree… It's kind of personality or JHG driven. What kind of experiences they're getting for development and things.*

The extent to which personnel felt they were able to develop was driven not by a consistent message from JHG in how placements should be delivered or how opportunities should be sought for professional growth. Rather, they viewed them to be motivated by the personalities in command position and the relationship they had with the NHS. Consequently, there was concern

that the lack of exposure and consistent approach from the command structures would have an impact on the standards of care being given on operations. This went so far as to question the value of service personnel working in the NHS if they are unable to get the clinical experience necessary for deployed care:

> *P014: "…I just don't think JHGs are fit for purpose anymore. And I think they're [military nurses] are not getting a lot of Level 3 [critical care] exposure..."*

Some of the angst towards clinical practice in JHG units focused on the contracts in place to enable access to the NHS for military nursing practice. This is reflected in the notional value of service personnel (NVSP) on which the amount paid by the NHS for military nurse work is based. At this stage, most nursing lines occupied by military personnel are set at band 5 despite the experience of a considerable portion of nurses being beyond this entry level.

> *P010: "…I think our current model of JHG being sort of quite finance focused, without getting too political, probably doesn't work in terms of the focus of what we're trying to get out of individuals…there's always going to be competing agendas of the operational need versus the business model. I am just not sure that we'll get to a point until we have another significant conflict. And where we*

won't have people SQEP trained, ready to go in the way

that we were sort of 6-7 years ago when we were doing

the business in Afghanistan."

Not only was there a perceived risk of being underprepared for operations on the current model, there was also a view held of the contract and the notional value of service personnel (NVSP) made military personnel subservient to the NHS, further limiting their opportunities for development.

P04: *"I say scrap the NVSP. Take our more senior and*

therefore those who should be more experienced out of

JHGs and put them into trusts where they are going to

get leadership development, where they're gonna get

development of those kind of skills that we're talking

about and whether gonna get exposure to the people

who are demonstrating as role models, high levels of

those skills that we want them to develop. And break that

kind of JHG slave to the NHS constraint, which keeps

people at band 5-6."

Nurses felt this was a significant factor in influencing civilian perceptions of their roles and what development opportunities they can access. In combination with the challenges presented with working within the NHS, the focus groups felt JHG offered little to support their clinical preparation and development.

The reputational effect of having military nurses working within a hospital was seen as being an incentive for the NHS. However, any perceived benefits for the British military nurse development have not appeared to have materialised for the British military clinicians. Instead, military nurses felt they were seen simply as a staffing pool, with a "conveyer belt" of nurses coming into and out of the clinical setting to plug NHS staffing gaps:

> *P015: "So, they're trying to impress the military because*
> *they want people to come to their trust. Whereas the*
> *JHGs have obviously had us for 20-30 plus years, it's not*
> *that sort of system anymore. It's a gain for them, it's just*
> *a conveyor belt of people coming through for them."*

There was though, some sympathy with the pressures faced by the NHS particularly around the nature of the workload and the lack of any break in the continual flow of highly demanding work. whilst they were frustrated by the lack of development opportunity, they understood the contribution they were giving to a workforce challenged by a complicated and relentless workload. This was typified by comments from P015:

> *P015: "But I don't think we can underestimate how tired*
> *the NHS is at the moment and how pressured the*
> *permanent staff are."*

Despite the issues raised regarding working in the NHS, the focus groups did recognise positive aspects, particularly around those undertaking specialist training clinical practice:

> **P014:** *"…They're [specialist trainee nurses] getting a massive experience within the NHS because they're either supernumerary or you know they've got so much more flexibility. They're getting a lot of really, really good experience at the coal face. But then post qualifying and we're not doing it so well…"*

However, moving out of the training margin and back into regular clinical practice saw this revert to the conditions described.

5.3.2 Operational Deployment

All groups were able to draw on varying levels of deployed experience to inform their collective views with the level of operational experience highest amongst the DSA and AMSTC groups. Overall, there were 11 open codes identified within the axial code of deployed operations (see table X). The operational conditions for use of NTC were largely driven by the differences in working in the NHS and split into two aspects: the physical and emotional challenges of being deployed and the professional issues.

5.3.2.1 Personal and Environmental Aspects

The unique demands of operational setting were discussed across all four focus groups with broad consensus. These were split along the lines of the physical and emotional conditions faced. Although the groups appeared pragmatic about the physical conditions, they remained a topic of discussion as a source of stress when away:

> **P012:** *"You're more tested I think in a deployed environment because of the unique stressors potentially of that environment."*

> **P021:** *"Or the cold showers when the water goes…"*

> **P020:** *"…if you're not used to 40–50-degree heat enough, and then you've got the air conditioning, literally totally broken…Creature comforts that we take for granted, you know, and it's just gone out of the window."*

However, this also ran deeper to include the personal sacrifices military nurses make, particularly in relation to families and communicating with home when mobile telecommunications or internet access is severely restricted or non-existent.

> *P020: "…first you need to give your phone…So that*
>
> *means that a lot, you know, I can't get a hold of my family*
>
> *when I want. And then you know, they give me a card, by*
>
> *the time you said hello, the minutes finished, and then*
>
> *you have to wait for another week or two weeks before*
>
> *the top up again…*

> *P022: Including missing your children's birthdays.*

All groups reported their military roles being frequently misunderstood by their civilian counterparts, who regularly showed little insight into the physical and emotional challenges of operational deployment. A number reported being asked by their NHS colleagues on return from operations if they had enjoyed their 'holidays' having been away from their UK clinical unit for extended periods. Not only did participants report this as being frustrating and borderline insulting, but served to highlight the difference in roles between British military nurses and their civilian counterparts.

Interestingly, the dangers associated with movement into a battle space, enemy combatant action or deployment into a humanitarian setting with dangerous communicable diseases were not raised by any of the groups. In a follow-up discussion with one group member, they revealed that on recent operations in West Africa, the biggest source of angst amongst the deployed team was having no reliable means to communicate with family and loved ones. They viewed themselves as being fully prepared for the

dangers and rigors associated with the Ebola outbreak, they understood the virus and had rehearsed continuously as a clinical team prior to deployment. Consequently, they felt prepared for the psychological and physical challenges of the clinical operation.

5.3.2.2 Professional Aspects

Despite preparation for operations through exercises, a common aspect across all groups was the higher level of demand placed on their NTC whilst deployed. The different levels of responsibility compared to their NHS roles and the lack of exposure to many aspects of nursing particularly in management terms, added to the deployment pressures and feeling underprepared for rigors they may face.

> **P003:** "*I'm not always sure that what we're achieving when we're in NHS hospitals…I am not sure that fully prepares us for being out on Ops.*"

This feeling of not being prepared for deployment stemmed from what they described as higher role and clinical expectations when in the deployed setting when compared to their NHS roles:

> **P011: "***I feel like the expectation of competence is higher when you're in an operational space, given you've got less organizational, fallback from the [deployed]*

framework. So, you're given more autonomy and

therefore more scope to be able to do more things than

you are in necessarily within the NHS. You are quite

restrained in the NHS."

This was particularly evident from the groups around leadership roles in the deployed clinical setting. Participants broadly reported not being able to rehearse the skills in the NHS needed to lead teams in the clinical setting. For those with operational experience, this was an area of real concern. Not only was there worry for fade in their own skills but they were worried that those without operational experience were not being given the chance to develop.

P021: "…when you head into the deployed arena you are

that HOD [Head of Department], you are that 2IC

[Second in command], you are taking department, or

even you could be in charge the senior nursing officer,

but you didn't do that back here [in the NHS] …"

Whilst the operational setting placed higher demands on the NTC levels of those deployed, the team ethos was central to being able to deliver operational care to the best possible standards. The team aspect of the deployed setting held high value for all focus groups. In exploring this many spoke of their experience of small, very cohesive teams in close living and

working conditions. This produced a continuity to the clinical team they rarely witnessed in the NHS:

> **P004: "**… there's a more consistent team on operations. You know, I've never gone into an ITU outside of an operational deployment and worked with the same people one day that I worked with the day before. Whereas on operations we, you know we build that team, and we build very cohesive individual shift teams..."

> **P003:** "…it's different than working with the team who go off shift and they all disappear, and you don't see them again for the rest of the day versus those people you live and work with all the time."

Although this could be attributed to the large clinical areas in the NHS and the much smaller teams, the outcome was a team which trusted each other. Furthermore, developing relationships within the teams meant they could look out for each other when things became difficult: "*I know how they are, and they know how I am …*" (P011).

The view of working against adversity and being 'in it together' was a central aspect of the operational conditions. It appeared that the deployment setting and the challenges being faced as a group galvanised their approach and helped to refine their use of a range of NTC domains.

Furthermore, it helped the collective to meet their common purpose to deliver the mission and ensure the highest possible standards of care.

> *P012: "I think the common denominator, the common denominator, is that we're registered healthcare professionals and therefore we're duty bound to uphold the has standards…"*

The issue of departments being siloed come up in discussion. Reflection on field notes, added that those working in their NHS departments and roles felt that common purpose was present in the NHS, but this was restricted to the departments in which they worked. For example, those working in the ED of a large UK hospital may not routinely interact with other clinicians in other departments.

> *P003: "Yes, there are a lot of challenges now, but I don't know whether actually part of the ability to cope went to that common purpose versus working in those siloed areas again and I think that's what gives us an advantage out on OPS, we end up working for a common purpose."*

However, the close proximity of colleagues in the operational space, shared accommodation, shared experience of the deployment challenges and the patient group, added to the common purpose that all participants felt. This influenced how NTC was utilised but also placed pressure on the skills not

routinely practiced within the NHS. Additionally, there was increased

awareness of the consequences of when those NTC skills are employed

badly:

> **P010:** "…the failure of those non-technical skills has
>
> been the net result of quite a lot of pain for quite a large
>
> number of people…"

The focus groups particularly focused on the impacts to the team and

relationships when not having the leadership and management skills to

guide others when working in the deployed setting. Indeed, P003 noted,

that without having the skills to support and lead other members of the

team, "*they almost become a disruptive team member in a setting where*

this can create issues…".

5.3.3 Conditions and Context

Throughout all focus group discussions on the non-deployed and deployed

conditions, context quickly started to emerge as a 'golden thread' at this

stage. Participants considered their roles from two very distinct aspects: the

deployed role and their UK non-deployed role. As such their behaviours,

communication and attitudes to work were at least in part applied

differently, driven by the conditions under which they were working. The

groups having considerable deployed experiences, felt strongly their

deployed roles remained the driver for clinical development but were

frustrated by the lack of understanding of the deployed context amongst their civilian colleagues.

All participants were passionate about their clinical duties and certainly felt that they offered value to the NHS in their clinical delivery but were frustrated with the lack of opportunity to develop the NTC skills they would likely use in highly demanding operational settings. There was no animosity or anguish towards the NHS banding system amongst the focus groups. Indeed, the skills and NTC associated with the various gradings used within the NHS were valued. Rather, military nurses lamented the limited or inconsistent access to opportunities to practice skills beyond the entry level for nurses at band 5. They felt by limiting access to the higher bands, not only was their contribution to the NHS being devalued but the nuances associated with their roles, their level of qualifications and their existing range of clinical experiences were not being recognised or understood. In deployment terms, this filtered through to preventing them from being able to practice and develop wider skills associated with higher bands, both clinical and NTC related, necessary for the deployed setting. This was fuelled by the desire to give patients and the organisation their best during deployments, but also to ensure they felt fully prepared.

The strong identity as British military nurses preparing for operations resulted in views of their role in the NHS having only limited value. Not being recognised for their deployed and UK based experiences and being

denied regular opportunity to practice NTC, served to widen the contextual gap between the two settings. They reported deep frustrations from the need to reconcile their military identity with an NHS role which gave them little opportunity to develop their NTC skills.

There was broad recognition of the demands made of them in the deployed setting and the differences with their UK clinical environments. Although there was some acknowledgement of the clinical workload, there was greater focus on the personal challenges, such as being away from loved ones and dealing with the lack of facilities taken for granted when at home. Perhaps understanding of the clinical demands and their operational preparedness in contrast to the uncertainty associated with where and when deployments would happen contributed to this.

It was universally agreed that NTC skills were not only required for deployed setting but were likely to be challenged in different ways to the UK. Additionally, they noted they would likely be in clinical and command positions not matched by their non-deployed clinical roles. Indeed, this mismatch was a significant source of angst, with all groups arguing that their roles in the NHS neither reflected what they would be doing in the operational setting or allowing them sufficient opportunity to practice the NTC skills they would likely call upon. The role of JHG and the inconsistent approach to clinical development between units was a further concern. This was rooted in nurses having differing levels of practice and opportunity to

develop based not on a universal approach to development across all units but on who was in post, their relationships with the NHS and their perceived drive to support nursing development.

Theoretical saturation for context in competence was reached by focus group three and confirmed during focus group four. The role of conditions of their work was seen as an imperative factor by all groups, which shaped competence in both general and NTC specific terms. The repetition of this issue amongst all groups, particularly around the opportunities within the NHS and the possible influence this could have on deployed operations, was a significant aspect in how they viewed what competence was and how to become or maintain being competent. Demonstration of both theoretical saturation for context in competence and focus groups relating of it to the construct and conduct of NTC, further strengthens context as the core category of this research.

5.4 Constructing Competence

The second selective code arising was the construct of competence: in essence visualisation of what competence should look like and what it should be made up of. Application of the Straussian coding approach identified three axial codes under the umbrella of construct:

1.   Competence in general terms

2.   Non-technical Competence.

3.   General Characteristics and the Military Identity.

Each aspect had a direct implication for how participants saw what being competent meant as a British military nurse and how the identification of domains within NTC were identified. Each of these will be addressed individually, evidencing the views of the focus groups.

5.4.1 Competence in General Terms

When discussing the concept of competence in more general terms, the focus groups related it more to who, when and how the specific elements were being used. Indeed, when discussing competence, the groups referred to specific tasks based on the requirements of the clinical situation further evidencing the strength of context as the core category. For this section, conceptual understanding of competence and what it is to be competent was considered in broad terms by the participants.

In all, twelve separate open codes were identified within the general understanding of competence (see table 12). Of the twelve identified open codes, experience, efficiency and safety, and knowledge were the strongest. The relationship these had with each other, and the level of

relative discussion is demonstrated in Figure 3. From this, it is clear to see the several standout themes generated from the most discussion within the focus groups.

Figure 3. NVivo Coding Wheel for General Competence.

A common reflection amongst all groups though was that competence was multi-faceted. Across all focus groups it was seen as a blend of knowledge skills, and experience to perform practical aspects of a role in a clinical context:

> *P023:* "So, I think you can break it down into your
> knowledge, skills and experience. So you obviously need
> the technical knowledge and the competencies
> there…so, I think grouping all of those together, that's
> what makes somebody competent in the clinical service."

Perhaps unsurprisingly, the broad understanding of competence of clinicians was both task and effects based with frequent expression of the need for competence to reflect both safe and efficient outcomes when undertaking clinical roles:

> *P03:* "*Yeah, I would say it's the ability. It's your ability to
> do something to complete the task safely and efficiently.*"

> *P012:* "*You can demonstrate you're able to do your job
> effectively and efficiently and safely.*"

This was further reinforced when in responding with the possible effects of not being competent. They commonly used terms such as *'inefficient', 'mistakes'* and *'ineffective'* when asked what the possible outcomes of not being competent could be. Within the groups, there was the underlying implication that this may affect the patient, although this was not expressed stated. Neither were the possible professional disciplinary outcomes of making errors.

As a singular aspect of competence, experience was viewed by all groups as one of the most important. Participants related this to all situations, whether operational or UK based. This view related to a perceived increase in the level of competence with the experience levels of the individual. All groups concluded that experience enabled them to contextually understand their role within the facility in which they worked or adapt to new situations. It enabled them to prepare for the challenges they were likely to face in either UK or deployed operational role.

> *P004: "So, I'd already been there once and was going back for another one so that gradual increase in knowledge and experience better prepared me. Certainly, you know, better than the last deployment. I was able to draw on everything that I'd learned and experienced...I was able to draw on all of my clinical, military and life experiences."*

Not only did the participants view this as being important to their own experiences, but they reflected how this could influence the wider team.

> *P011: "…having been on exercise with 22 Field Hospital, skills and the interactions you're going to get are very different and it's definitely experience helps along the way."*

All groups also viewed experience, knowledge, and competence as an interrelated continuum. It was the ability to draw on their contextual experience which enabled them to grow their competence, but also allowed them to appropriately apply their knowledge to the situation in which they found themselves. This had two aspects. The first was that the expectations of a more experienced clinician were commensurate with the level of experience they held. This related to their clinical output and past nursing experiences.

> *P015: "… the level of competence might come with experience… I would expect somebody, for example, an experienced nurse to perform to a different level to someone who is newly qualified…."*

However, experience was differentiated within the focus groups with consideration that 'life experience' as opposed to professional experience, was a factor. This enabled understanding of how experiences come together and can be applied to a professional setting.

> *P001: "…your competency is how you apply that knowledge. And then obviously that grows as you go along that novice to expert pathway… you know what I did as a newly qualified nurse is different to what I do 30 years later."*

The second, related to the ability to support junior members and being able to escalate responses to demanding situations. They reflected that there was challenge in both identifying the need and having the credibility with others based on experience to be able to respond to needs, as expressed by P023:

> *P023: "…and we've all experienced like a junior nurse asking your doctor for something and it gets completely brushed aside, then somebody else with more experience tries it with more assertiveness, and it's like actioned straightaway."*

From this, a direct link between experience and perceived credibility can be drawn. Participants across all groups expressed similar scenarios, where, as a junior clinician, they were brushed aside until supported by a senior colleague. One participant expressed seeing the ability to draw from experience to inform decision making to be an NTC in itself:

> *P019: "I suppose experience and knowledge about how people do it…that's like a non-technical skill."*

Indeed, the transition from novice to expert, as originally described by Benner (2001) was articulated across all groups as aiding not only in understanding growing competence but also gave insight when gaps in personal competence may exist. This particularly related to those who had

become highly knowledgeable and experienced in a specialist aspect of care.

> **P005: "***The knowledge is huge when you come out of university, but I wouldn't necessarily say your competence and your application is equal. And then as you kind of go along your timeline, your competence can expand. But sometimes your knowledge can shrink because of that stove piping.***"**

The more clinically experienced participants expressed understanding that the specialisation of their knowledge and skills frequently affected their competence outside of their own clinical or military areas:

> **P003: "…***arguably, expert I became, the more I realized how little I knew.***"**

Experience was viewed as a key component in competence, as it enabled people to adapt to the situations in which they find themselves. In doing so, they viewed experience as a driver of contextual application of competence. This not only served to deliver care but to help support others in their development. However, there was concern amongst participants, particularly the JHG group, over the lack of current opportunities to gain operational experience. The end of large-scale combat deployments associated with Afghanistan and Iraq has resulted in smaller, bespoke operations. Whilst many of these serve to support wider humanitarian or

peace keeping objectives, participants saw this as a risk for both, them as clinicians and for the patients they would be caring for. Recently, fewer personnel have been required to deploy resulting in loss of collective and individual experience in dealing with high paced, kinetic challenging settings. This was a particular concern across the groups, especially amongst the junior members. They also felt that a future large-scale operation was inevitable but were worried out being underprepared.

> **P014: "**Uh, I think as well as we're losing some
>
> experienced individuals. So, we've not necessarily got
>
> that anymore. And on the flip side, where maybe asking
>
> quite a lot of the junior and more inexperienced people
>
> because they've not got that senior and clinical lean on
>
> from a military perspective."

5.4.2 Non-technical Competence

The discussion in all four groups revealed a broad range of aspects which they felt were non-technical competencies. The general elements of competence already discussed, infiltrated every aspect of NTC. Context continued to run as a golden thread throughout, with participants relating each NTC aspect to their situation. Of these, the operational context was the strongest theme throughout this stage. This was in part related to how they viewed themselves, their identity and the demands placed upon them (see next section). To explore the findings thoroughly at this point, it was

necessary to have 2 rounds of open coding. The first round identified

multiple competencies from the focus group discussions. Twenty-seven

separate open codes were identified. However, having so many codes was

unwieldy and difficult to visualise. Following Glaser's (1978) funnelling

approach, a second round of open coding was required to enabled them to

be collapsed into workable open codes. The second round of open coding,

supported by constant comparison between findings from all four focus

groups, led to the identification of four strong open codes.

These codes broadly echoed the outcomes of each group demonstrating

theoretical saturation which began to emerge in focus group two. These

were then confirmed through focus groups three and four with no new

codes within NTC identified in the later stages of data collection. Each of

the four open codes from the second round were well represented but

leadership and communication were the strongest. Figure 4 shows the

relationship between each of the NTC elements and how leadership raised

marginally more codes than communication.

Figure 4. NVivo Coding Wheel for Non-Technical Competence.
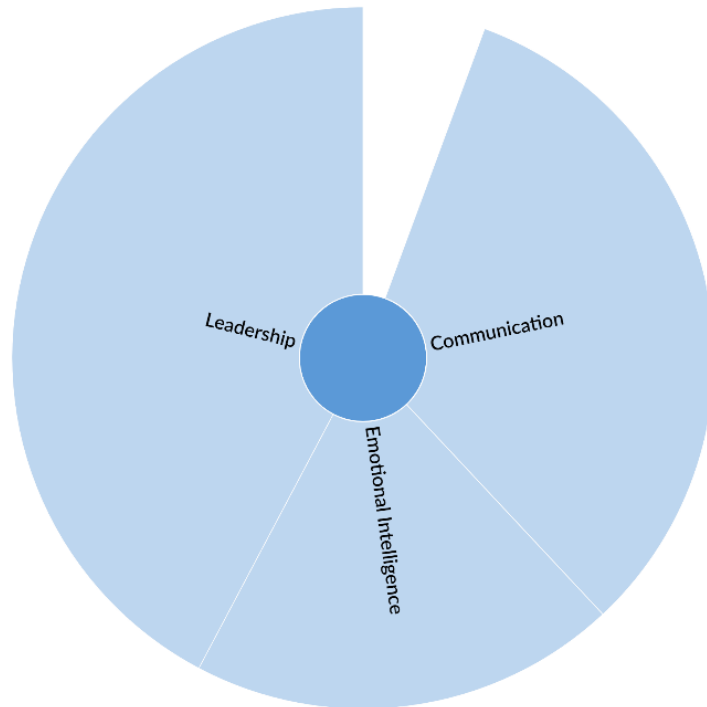
Interestingly, many of the participants discussed NTC in various terms. Participants saw NTC through the lens of a variety of inter-related *'humanistic'* skills and competencies which required balancing for success. Communication and leadership were common features typified by:

> **P013:** *"…the interpersonal skills, the ability to empower others and leadership and adapting that leadership style for the different situations."*

Although there were clear groups of open codes, as outlined in table 12, many of the participants conceptually viewed NTC as concurrent use of multiple interrelated skills. For example, leadership required application of emotional intelligence and communication skills. As a result, all groups had some difficulty in being able to unpick NTC with many aspects overlapping between the core contextual theme. There was additional complication with the inconsistent understanding of terms being used. For instance, all groups referred to emotional intelligence as a core NTC but struggled to articulate what was meant by the term. Each of the identified themes in this section will be discussed individually.

5.4.2.1 Leadership

Across all groups, leadership was universally seen as a core aspect of NTC for British military nurses. Great value was placed upon not only their own roles as leaders but the impact that this could have on the function of the team. In this context P005 spoke of both the privilege they felt in their leadership role but of the influence it had on their team and outputs:

> **P005:** *"I was privileged to take part in some of the leadership stuff… And I think that those kinds of roles which fall then into our leadership and our management etcetera have a massive impact on individuals and departments and organisations as a whole."*

In line with the wider contextual debate around competence discussed so far, discourse covered the context in which leadership was being used. None of the groups discussed any specific leadership styles or models but did articulate the contextual frame in which it was being used and the strong influence it can have on the nursing teams, particularly in challenging situations.

> *P013: "…you're gonna have a different leadership style if you're running a cardiac arrest to when you're trying to encourage somebody to speak and it's sort of a focus group and a group discussion kind of thing style's gonna be very different."*

> *P012: "…if you've got somebody who is a strong leader in that role, they can, they can step in and calm the waters and manage people who is being somewhat difficult to others."*

The application of good leadership skills was, across all groups, highly context driven. Both quotes above relate to the clinical and personnel management contexts. The ability to transition between different ways to apply leadership was a significant aspect of having a high level NTC. Although leadership was the largest code to emerge from the groups, it was rarely seen in singular terms. Rather, it was the outcome of blending a range of skills applied to the situation. Both emotional intelligence and

communication, also viewed as individual aspects of competence and discussed later, were seen as vital elements of the leadership function.

The successful functioning of the team was a central leadership value for many across the groups. This ethos was reflected in all groups and appeared regardless of whether being applied in a leadership or follower position. In leadership terms, this was rooted in having a deep understanding team members to motivate them in a way which would culminate in both individual and team success:

> **P007:** *"And that's part of being aware. You know the SNO [senior nursing officer] or the clinical director being aware of the skill sets that are available and the experience available within their team and utilizing that most effectively."*

Additionally, this extended into a pastoral aspect in which, understanding individual issues would enable forging of trust. In doing so, team members felt listened to and supported whilst the leader is viewed as investing in the team.

> **P017:** *"…also knowing that knowing how to look often holistically, so for example, they could both have the same welfare issue, but they're both gonna respond to think differently, and then come into the workplace.*

> *Again, they're gonna respond differently. And knowing*
> *the differences in them and knowing them inside out to*
> *know what they need from you in order to be successful*
> *in their job."*

The team building aspect of leadership resonated strongly across the groups but had an operational context in their thinking:

> **P004:** *"So, I think that exposure makes us able to build*
> *effective teams or helps us develop the skills to build*
> *effective teams quickly, which we can then take on*
> *operations and we can use that to absolutely build some*
> *really, really cohesive shift teams."*

There was more discussion in their military teams and the potential for deployment than how they fit into the NHS. In leadership terms, the focus was very much pointed at their military roles and reflected their lack of exposure to more senior NHS roles. This served to reinforce the strong military identity they held.

> **P003:** *"You've got to have trust, and I think this is where,*
> *again, we tend to build this out on OPS more than we do*
> *in the NHS…I would trust a lot more of my military*
> *colleagues to understand me…"*

Indeed, this operational/military element resonated with the conditions in which they were working, translating into a greater level of trust in their military leaders over their civilian counterparts:

Across all areas, several core aspects of leadership were identified demonstrating not only the complicated role played by leaders but the varying levels at which it is applied across the spectrum of military ranks. In line with the other codes, leadership was comprised of an array of codes which interacted to produce an overview. Table 12 outlines the leadership codes identified across the four groups. The participants did not view the use of each of these elements in singular terms. For successful leadership, regardless of their setting, they felt it was a situationally driven mix of skills to not only complete the tasks but, to motivate and develop their teams. As already discussed, experience was a powerful tool which was drawn from to inform how each was applied and had a considerable impact on how they viewed credibility.

From these leadership functions the greatest value was placed on role modelling and mentoring, reflecting the considerable value on the support and development of those around them.

> *P004: "…exposure to the people who are demonstrating as role models, exposing to high levels of those skills that we want them to develop."*

> *P05: "…I think role modelling is really important because I think if you can see it, you can be it…, to be able to kind of see how things are done…the way that that person does it…!"*

Indeed, the lack of current operational pace seemed to add impetus to this, especially for the more senior participants. There was a combination of reflection on their experiences with those who had mentored and supported them with a drive to now play that role. This was rooted in leading by example, perhaps reflecting the Royal Military Academy Sandhurst motto 'Serve to Lead'. There was considerable reference to understanding the skills required to be an effective mentor and leader. It appeared to move beyond the teaching and support functions to contextually using a plethora of skills and traits to inspire others.

> *P005: "…there's a massive difference in having that qualification and then being a really inspiring and influential mentor or just being able to tick the boxes in the books that to say that people have achieved what they need to achieve. And I think that those kinds of roles which fall then into our leadership and our management…"*

There was also acceptance from the groups, that their opportunities to role model leadership, especially in the clinical space was limited by the operational pace and restrictions in the applied NHS banding.

Although there remained a respect for the rank structure, there was limited focus placed on it in terms of clinical delivery. Indeed, this filtered through to making the best use of the knowledge and expertise within the team, regardless of their position. They understood there may be others in the team with greater experience in dealing with the situation and were ready to utilise that:

> **P020:** *…I don't know everything. You know, as I say, sometimes I go somewhere, and it's just like, I haven't got a clue and I am thinking that I'm happy to learn from my private*

Whilst rank was considered, there was a greater focus on ability to deliver what was required. Indeed, the groups articulated that having a qualification or even being placed in a command position did not necessarily reflect the ability to lead. As many felt these were core aspects of their leadership role, there was little to discern whether they were applied in their UK or their deployed clinical roles. However, there was a perception that their leadership roles and development of skills had greater impact on the military teams over the NHS due to limitations in their clinical roles.

The issue of human factors was very briefly raised in very general terms by the RAF members of the focus groups. Despite the high level of coverage in other industries, particularly aviation, there was little to support their understanding and application from the focus groups involved in this study.

5.4.2.2 Emotional Intelligence

EI was raised repeatedly across all four focus groups as a required aspect of NTC. However, despite the value placed on it and with deeper questioning during the focus groups, definitions were vague. Instead, participants described EI along two central strands: empathy and adaptability.

From an empathy perspective, discussion was very much confined to understanding the experiences of the military patients likely to be seen in the deployed setting.

> **P004:** *"… actually it's really important I understand what it is that that our patients potentially have been up to and go through when, when, when they get injured or sick…"*

> **P013:** *"So that in non-technical very much to me is empathy…"*

There was a strong view that understanding the experiences of military patients would likely increase the view of credibility by them. This linked strongly across the groups to supporting those who are directly involved in war-fighting roles.

The second code to emerge from emotional intelligence, was the impact this has on adaptability. Once again, this was driven by the military setting rather than work in the non-deployed space.

> *P001: "…that adaptability and that ability to change and change at pace that we expect all of our military nurses or military healthcare professionals to be able to do and be that adapting to COVID or flying to the arse end of wherever."*

However, this was not just about coping with being deployed, often at short notice but the ability to adapt to the situation, which was frequently fuelled by adversity:

> *P001: "…we're telling people you're gonna go to an unknown location. You may or may not be in the tent or building that's half falling down behind your ears. You may or may not have all the equipment that you want because we all know the challenges with the supply line.*

> *You don't know the people that you're working with but*
>
> *we expect our people to be able to absorb that and adapt*
>
> *and get on with it and create a team that is slick and save*
>
> *lives."*

This though was not limited to how one manages themselves in such situations but how this can influence others to cope who perhaps don't have the experience or EI to deal with what is happening:

> ***P005:*** *how you show up in certain environments and how*
>
> *you project yourself…So you kind of have that and*
>
> *maybe that accelerated emotional development for some*
>
> *people not, not for all. And therefore, better able to cope*
>
> *and support others.*

Without doubt, all groups argued that EI is a key aspect of British military NTC, which enabled them to work well with their patients, team and adapt to sudden changes in their situations. This was particularly strong within the military context, where they viewed the greatest levels of adaptability were required. However, notwithstanding their descriptions of it as a high value aspect, they were unable to articulate what it was.

5.4.2.3 Communication

Communication was raised continuously by all focus groups as a core aspect of NTC. Consequently, it reached theoretical saturation within the first two focus groups with many of the same aspects repeatedly cited throughout the discourse with groups three and four. It was universally seen as being intwined with leadership and the application of emotional intelligence with colleagues and patients alike. In line with the core category, it was driven by the situational context in which it was being used. The statements below highlight the importance placed on communication by participants and the strong links it has with other aspects of NTC.

> **P04: "***Like effective communication is the is the key and that encompasses all of the, all of the things we've talked about in terms of the choice of language that the understanding of the audience that we're directing, that communication to. And there's. I think there's a crossover between communication between the technical and non-technical.***"

Participants identified that they would change their communication styles to suit the situation they were dealing with further reinforcing the contextual element. P004 cited the challenges for British military nurses in having to move between communication skills for different situations.

> **P004: "***You know, if I'm if I'm carrying out procedure,
> maybe doing a dressing change or something like
> that…I'm communicating with that patient about what I'm
> doing. That communication is a non-technical skill or is
> that wrapped up completely in the technical skill…?
> …part of my care of that patient that is communication
> with their family. I'm then using those communication
> skills to organize and manage and support my team…"*

There was a clear distinction across all participants between skills for patient care, delivery of technical elements, and the leadership functions. All groups highlighted the need for seamless movement between these to be successful.

Strong discussion emerged around the differences or similarities in the application of communication in the operational and non-deployed settings. There was acknowledgment across all groups that there are many communication foibles unique to the military setting, particularly when personnel are deployed into operational, military, or new NHS settings:

> **P015:** *but learning a new environment makes you have
> to do things differently, communicate and behave
> differently to fit in…*

However, driven by a common clinical language and the situations, many saw ease of transfer of communication skills to the clinical setting. The commonality afforded by the clinical or military lexicon, with the ability to move between each was seen as an enabler for military nurses in all settings.

> *P012: "… whilst the terminology, the words, might be slightly different I think the meaning behind them and is really all the all the same sort of non-technical transferable stuff… good communication skills."*

Interestingly much of the discourse around communication focused on the relationships between team members, whether that was with military colleagues or NHS partners. Rather as detailed below, participants referred to the requirements of the roles set out in regulatory guidance or the knowledge, skills and experience (KSE) requirements of their professional clinical roles.

> *P019: "…so be able to practice the best interests and communicate clearly work cooperatively."*

The communication with patients was briefly discussed, but only within the context of operations and driven by both credibility of being in operations and the shared experiences of deployment:

> *P011: "…the way in which you communicate with fellow*
>
> *soldiers who've got the same experience and you've*
>
> *been through the same environment together.*

The application of communication skills was driven by the contextual application across all groups. The key area of crossover between their non-deployed and operational sat in clinical terms. Their transition between JHG units, wider NHS settings and within deployed military healthcare is facilitated by the common language used the delivery of care between professionals. However, this varied when considering the leadership or management functions of their roles when working with their military team. Throughout application of communication to their roles, the core contextual theme was strongly reinforced by all focus groups.

### 5.4.3 General Characteristics

There was general discussion of a range of aspects relevant to NTC across the focus groups which revealed several traits participants felt were vital for NTC, but which were not necessarily competencies. Indeed, the groups saw them as important components in delivery of three central themes of NTC. These characteristics added another tier of context for competence and were echoed across the entire participant sample and were seen as necessary for anyone to be considered contextually competent. Given the level of discussion and value placed on these traits, they were considered

an important theme, wholly relevant to the emerging theoretical structure.
Table 16 outlines the open codes identified within the emerging axial code.

Six open codes were identified but the strongest emphasis, as
demonstrated in figure 5, was placed by the focus groups on resilience,
credibility, courage, humility, and situational awareness. Although, these
are explored in more detail below, there was considerable discussion
generated. Therefore, additional evidence statements for each can also be
found in Appendix XI.

Figure 5. NVivo Coding Wheel for General Characteristics of Military Nurse
Competence
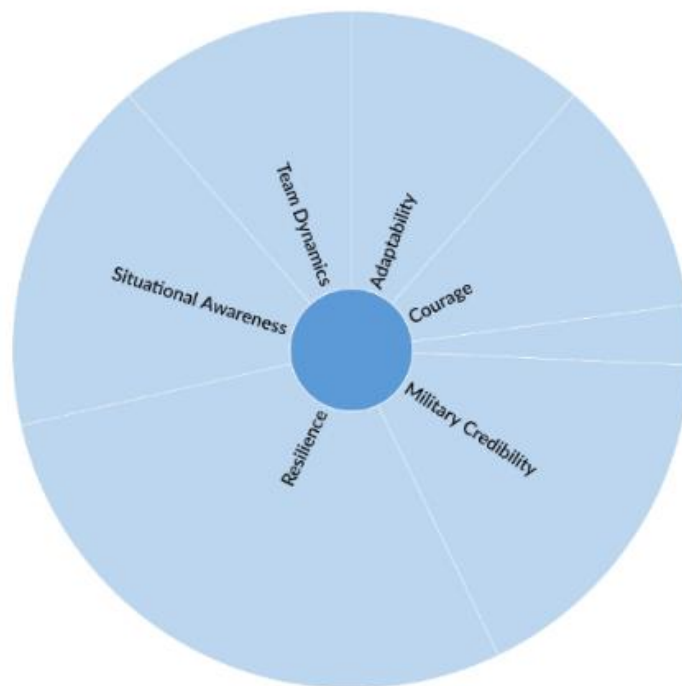
P003 articulated that each of these points, although discussed individually throughout this section, are intrinsically linked. Each aspect feeds into another and were rarely characteristics considered by the focus group in separate terms.

> **P003: "**Yeah, but I also think its credibility, but I think I think that the there's two bits which are also go a bit hand in hand. It's courage as well. So having the courage to then apply, particularly in the leadership side of things. Uh to have those conversations sometimes, or to do something. You having the courage to bring that back into a more acceptable speech…"

5.4.3.1 Resilience

Resilience was seen in both physical and mental terms across the groups with being able to work outside of a 'comfort zone'. Resilience was largely attributed to being able to cope with the physical and mental demands associated with operational deployments including aspects such as dealing with environmental factors (heat or deploying with equipment such as weapons and body armour). However, a great deal of focus within resilience centred on being able to cope with emotionally and mentally stressful situations such as high patient flow, frequently witnessing significant illness and injury or working in an arena of high danger. Whilst resilience alone was not seen as being a competency, it was widely

considered to significantly influence military nurse performance and utilisation of communication, leadership, and EI.

Further exploration, particularly within the clinical facing JHG group revealed concerns they had with the resilience of junior military nurses. They cited a growing number of military nurses working in their UK, NHS imbedded role as not having the levels of resilience they would have expected. They reflected on their own previous operational experiences noting with views typified by:

> *P021: "They are just a different breed, our nurses, our new nurses now they're totally different and they don't seem as robust as what we were back in the day."*
>
> *P020: "Am I allowed to use the terminology snowflakes?"*

Some accounted for this from a generational perspective, based on decrease of interpersonal relations, over reliance on technology which would likely be unavailable on operations, and the recent Covid-19 pandemic. P016 empathised with the possible impacts of large-scale changes and the impacts these may have had:

> *P016: "…you can't help their lived experience… So for those of us, you know, like, I can imagine, like, the pandemic and the lockdown…for a lot of people, the*

> *pain, the level of practice, and the impact on people's*
>
> *mental health has been quite significant."*

With several personnel across the sample having significant experience of deployed combat and humanitarian operations, there was concern that the lack of preparation associated with the roles in the NHS and the reduced levels of current operational activity and preparation, would have a detrimental impact on the resilience of junior personnel:

> **P019:** *"…they are thinking I'm not gonna go anywhere,*
> *I'm not going to get mentally prepared… in comparison*
> *to, obviously, back in the Afghan those days, it's almost it*
> *was expected, surely when he joined up that was going*
> *on, I've got to be going out that door [on operations]. And*
> *you mentally prepare yourself when you're in your*
> *training…. Whereas now, you haven't got those big Ops*
> *going on."*

However, there were dissenting voices, who argued that the lack of opportunity would not necessarily result in issues with resilience. They noted that they would not know how personnel would respond until tested and had trust in their ability to adapt to the challenges as expressed below.

> **P016: "…***if you were to just deploy them… Surely most*
> *of them will be like they just crack on and do it."*

The importance placed by this group, on resilience of military nurses was considerable particularly in relation to the operational context, and quickly reached theoretical saturation over the first two groups. This topic continued to be raised by the other groups. All acknowledged the requirement for military nurses to be resilient to the challenges associated with their Service role both in the UK and on operations. This though was weighted against the concern they had, that, in their experience, a significant portion of junior nurses would not have the resilience required to deliver their NTC under the duress of a deployment.

5.4.3.2 Credibility

Credibility was a key issue, especially amongst the patient facing participants and viewed in either military or clinical terms. The value of being credible was evident as influencing how participants were perceived by others and by themselves.

> **P005:** *"I think credibility…it's that trust and that authenticity in that person as well. Yeah, credibility."*

Additionally, participants viewed being credible as intrinsically linked to other aspects of NTC and most strongly with leadership as noted below:

> **P003:** *"Yeah, but I also think its credibility, but I think I think that there's two bits which also go a bit hand in hand. It's courage as well. So having the courage to then apply it to work, particularly in the leadership side of things."*

They perceived that experience contributed to their credibility as clinicians and military leaders. Indeed, experience was viewed as a central part of credibility with wider considerations such as qualifications rarely mentioned. This helped to shape how they were viewed by other members of the team, particularly the junior personnel and added to the trust they felt is required to work in perilous operational settings. Credibility in this context linked directly to the role modelling and mentoring aspects of the leadership role.

From a military perspective it was not just about being able to function safely within a deployed military setting but having credibility with the patient group they are most likely to treat:

> **P004:** *"…that we have is that is that military credibility with our patients as well you know. I well remember sitting in abject misery at Lydd [Kent – pre-deployment training base for Afghanistan operations] …thinking, why am I why am I here? Why am I doing this? But actually, to have the medical credibility with our military patients, when you're when you're sitting chatting to guy with his legs blown off as he was the hedgerow man on the*

patrol. And if your eyes glaze over and he doesn't think

you know what you're talking about, well, you don't have

any appreciation of what it was you went through. Then

you lose that little bit of credibility…"

This view is representative of many participantS and demonstrates credibility, in their view, was based in the experience they shared with their patients. It enabled them to associate with the patient adding to their empathy of their situation (which in turn adds to their EI). In military terms this frequently reflected the operational exposure throughout a career. P004 noted the positive impacts of being involved in collective pre-deployment military briefs prior to Afghanistan as this influenced both the participant and the reflected perceptions of the serving personnel around them. Participant value in credibility was not just rooted in the clinical delivery – it is unlikely that the soldiers with them would have an insight into the specific medical training or practices. Rather, it was about ensuring the deploying soldiers were aware of the medical support they would have should they be injured, and this medical support had been given some of the same training. This reflected a strong belief in participants to meet what they saw as an obligation in the physical and moral components of war fighting.

The issue of knowing when clinical personnel do not have credibility for the situation was raised. This was particularly raised by P003 who elaborated

by discussion an event where those around them were more qualified and competent to handle:

> **P003: "…***when you're in the back of an army vehicle with a section or whatever. And just because you're moving between locations and they start to talk about being hit by IED or mine, do you know how we hit our 5 and 20s [observation points], etcetera. And they turned round to me as a lieutenant Colonel and said: "Ma'am, if that happens" and the first thing I said to them was you tell me who I need to stick with. I will absolutely follow your lead and I will just sprint as hard as I can to keep up with the person I need to keep up with. But don't worry, I'm not gonna try to lead you. And I think that in some situations, understanding where your limitations on your military knowledge and leadership are, and having a little bit of humility in those situations gets you more credibility than you just trying to front it out."*

Exploration and understanding of limitations of knowledge and experience reflected not only an understanding of the role played by soldier in this situation but added to EI. This in turn reinforces the interrelated concepts throughout NTC.

The issue of credibility also infiltrated through to participant experiences within their UK NHS based roles. There was the strong view that civilian

colleagues did not hold the same value in their experiences and therefore viewed them less credible in some way. This was in part due to the limited senior roles associated with their NHS banding, fulfilling NHS requirements and the limited opportunities for military practice particularly expressed through:

> **P003:** *"So, we need to just almost balance out some of this, the shortfalls that we're seeing [in credibility] within the NHS is because they're all being seen as band 5 nurses."*

This led to questions over not just the role limitations within the clinical setting but the lack of training opportunities within the military training environment.

> **P001: "***How do we get them that [military credibility] when actually, how many military days do most of us do a year? You know, I go off and do a week, training or whatever. For most of us… exposure to that is minimal nowadays."*

Not only was this a source of professional vexation, but participants were frustrated by the lack of credibility acknowledged by their civilian counterparts against the backdrop of their operational and NHS experiences. This was compounded further by the banding they had been

assigned which prevented them gaining experience in the roles that would stand them as credible within their NHS colleagues.

5.4.3.3 Courage, Humility, and Situational Awareness

Rather than being viewed in the physical or combat sense, courage was largely viewed in terms of making the right decision or doing the right thing at the right time. Indeed, there was little consideration or discussion of the physical risks of deployment. Instead, it appeared that these were tacitly accepted as part of the job. Whilst there was some reference to clinical decision making, much of the courage was related to personnel management and leadership situations as outlined by P017:

> **P017:** *"I don't know what you call it that the ability to just do the right thing? Yeah. Like if you make the ability to make the decisions that need to be made. I've seen it in the last couple of years, and people just don't want to make hard decisions, because it's the right thing to do. And they they're scared of making that decision."*

Through discussion it became clear that courage in the decision-making process was not only associated with the leadership function but the mentoring and supporting aspect as well. Indeed, this specifically related to avoiding a 'failure to fail' culture where standards in military but particularly clinical standards fell below the expected levels:

> *P004: "I think the there's huge amount of work done on*
> *the failure to fail. So, you know on the one hand we allow*
> *incompetence to endure and on the other hand we're as*
> *a profession. We kind of naturally shy away from those*
> *really difficult discussions. You know the "you're really not*
> *cut out for this" conversations.".*

Not only does this failure represent a danger to the clinical or military standards, but it also takes courage for individuals to identify the risk and take the appropriate action. A further point made by P016 was supported by the JHG focus group where the failure of students to meet the required standards was viewed as a failure in the mentor:

> *P016: "I do think people do fail. And then I think*
> *sometimes we beat ourselves up when they do. As in*
> *like, there can be that little bit of that professional feeling.*
> *I mean, there was the failure to fail…in terms of a mentor,*
> *nurses, mentors, particularly not wanting to fail students,*
> *because they felt they were the failure if they did that…"*

To some degree this was seen as a means of self-protection by the mentor to avoid conflict or potential complaint. P016 went on to elaborate, points which were widely supported across the focus groups:

"…So when they come in front of you, they call you a

bully, they call you somebody that puts them down you

they call you, you're discriminating against you, you're

picking on me, you're singling me out when you're

entirely not. But that's their interpretation, and then of

what you're doing, because they've had a lack of that

[courage to call out poor practice] prior to this point."

There was the perception that calling out those whose practice was below par would risk reprisal in a system that may not be supportive. Indeed, many in this group felt that a part of leadership was to appropriately support those who had identified areas in need of improvement or anyone who had to deal with challenging personnel.

As with the other characteristics required for NTC, courage seemed to be intricately linked with all the other aspects including credibility, humility, and situational awareness. This included having the moral courage to have difficult conversations or demonstrate the humility to show you are not sure about something as detailed below:

P016: "But then adding that to the list of things, it's

almost like humility. Yeah, ensuring that humility, ability

to perhaps you soon as you say, you're not sure. So

you're prepared to listen, and therefore, the other people

show leadership and that is followship and so that's

something else as well perhaps. …because I think as

you're describing how you use humility…"

The issue of rank and having these characteristics was poignantly raised by one participant who noted:

> **P003:** *"I think we got we got to be aware and got to have*
> *some humility and some be humble and really in some of*
> *those situations because it's quite easy to flash the rank*
> *and therefore lose the credibility sometimes… And I think*
> *that in some situations, understanding where your*
> *limitations on your military knowledge and leadership are,*
> *and having a little bit of humility in those situations gets*
> *you more credibility than you just trying to front it out."*

Not only does this statement evidence the relationship these characteristics have but it broadly reflects the dichotomy that military nurses face within the rank and clinical structure. As discussed, rank was largely not spoken of in terms of the 3 axial codes within conduct but there was acknowledgement within the nursing sphere that rank may not reflect operational, clinical, or military experience, particularly in the current slow operational climate. Although many senior officers (major and above) are likely to have considerable experience, the more junior officer cohort are likely to have less than some of the non-commissioned officers. This, however, is not unique to the nursing and medical setting – it can be seen

in many of the professional corps and organisations across Defence. Management of this scenario requires understanding of the team, the situation, and the roles they are employed to undertake.

Together, these general characteristics were viewed as being central to being able to successfully work in a team in challenging settings as articulated by P012:

> **P012:** *"But I think that the pressures of operational environments probably stretch your application of them. You're more tested I think in a deployed environment because of the unique stressors potentially of that environment. And you know we, you know, you should have ability to work as part of a team and communicate when it's really, really required. It's really more important can actually be tried and tested.*

5.4.4 Constructing Non-Technical Competence Summary

Exploration of how NTC is constructed revealed a complex picture across all four groups. Although distinct codes were revealed under the axial bracket, it was clear from an early point they were viewed as inherently interrelated. For example, good leadership was not considered possible without the application of good communication skills or emotional intelligence. The general characteristics were not necessarily viewed as

competencies but were articulated as being vital to the successful application of NTC. Many of these characteristics were driven by the military context of the participants with many frequently referring to how they were applied within the operational setting or the differences with their UK clinical environments. Indeed, the contextual aspect was strong throughout all discussion on what made up NTC and in this case they related strongly to the values and standards expected of all serving personnel.

The axial codes of leadership, communication and emotional intelligence emerged from all group discussions, reaching theoretical saturation by the end of the third focus group. Passionate discussion amongst the groups revealed the complicated nature of NTC and demonstrated the difficulty in viewing each independently. The groups found it hard to unpick each aspect without relating it to others, serving to highlight the challenges in not only identifying how NTC is constructed but how it can be measured. The contextual relevance to the application of such skills contributed further to the subjective understanding. The groups identified additional complication from the hierarchical structure of the military organisation which did not always relate to experience or ability. Participants spoke of not necessarily having rank or being in a command position to show relevant attributes of leadership. Rather this was directly related to credibility and experience. They went on to note that emotional intelligence allowed them to not only understand their own limitations and those of others but to utilise the

expertise of the team around them. This behaviour was seen as vital to mission success and for the team functioning.

A challenging aspect of group discussion was the use of terminology which was not always universally understood. Emotional intelligence particularly stood out with respondents assuming understanding of what this meant or offering only vague insights into its meaning. Likewise, they spoke passionately about leadership and how it influences their daily practice but spoke in broad terms about the aspects without always giving definitive examples.

5.5 Conduct of Competence

The conduct of military nursing NTC arose as the final core theme. This specifically related to how military nurses would be exposed to the required NTC aspects, how this was measured and the associated challenges with each of these. Within the Selective conduct code there were two clear axial codes: metrics and exposure. As with the previous analysis, these were also heavily influenced by the context in which the skills were being utilised and the specific skills being used. Again, the clinically associated NTC held cross-over between the non-deployed and deployed settings. However, there was universal agreement on the challenges of seeking opportunities to gain experience in senior NTC elements. This in turn led to challenges in how any such exposure, which was frequently reported as *'ad hoc'* based

on the NHS requirements at time personnel were working, could be measured, or recorded. Although there was significant discussion in both areas, there were limited ideas put forward to address the challenges.

Although the discussion within conduct centred on two elements, this was not even. Measurement and recording of NTC occupied much of the discourse with more open codes identified during the analysis. Figure 6. demonstrates this with each of them being discussed in subsequent sections.

Figure 6. NVIVO Coding Wheel for Conduct of NTC.
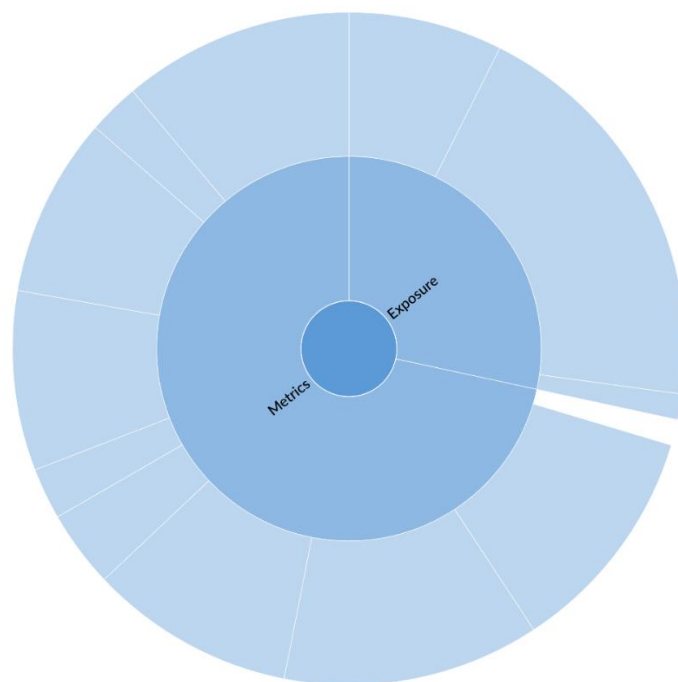
There was universal agreement across all groups for the need to have a
degree of assurance and validation in maintaining standards. Perhaps
unsurprisingly, this was strongest in the AMSTC group, whose purpose is
the assessment and validation of medical assets either deploying or being
held at readiness. Although forming a relatively small element of the overall
discussion time, the open codes leading to the axial code (Table 12), were
a result of some heated debate, particularly around means of assessment
and the frameworks currently in place. These can be seen
diagrammatically Figure 7 noting that assessment and the current
framework occupied a disproportionate amount of coding output.

Figure 7. NVIVO Coding Wheel for Coding Metrics of NTC.

Within the open coding process, the assessment and capturing of competence featured strongly throughout. As the current means of nursing assurance, the DONC framework came in for heavy criticism typified by the following comments:

> **P016:** *"We have a framework already, realistically, is DONC a sufficient enough framework?"*

> **P018:** *"Well, the DONC is a waste of time…"*

The respondents all noted an over-emphasis by their employers on the DONC framework as a reflection of competence but undervaluing their nursing and military experience. They viewed the technical nature of DONC, as taking away from consideration of wider NTC skills which are scarcely mentioned with no identified means of measurement.

> **P016:** *"I think the technical skills are covered. But I don't think the non-technical ones are at all…there's not enough emphasis on the non-technical ones…I do think there has to be an emphasis on it…"*

Whilst they felt there was a heavy focus on DONC, they also reflected the willingness to take personnel 'at risk' if they had not completely signed off to ensure the Force Establishment Table (FET) was filled. This led them to question the value of completion prior to deployment, especially when they

are likely to gain further experience in the operational setting or if there is

the reasonable chance of deploying anyway typified by comments from

P020 and P019.

> *P020: "With reference to the DONC, are we putting too*
>
> *much emphasis on it for people to go deploy."*

> *P019: "I didn't get signed off for my level 3 DONC but still*
>
> *got deployed as a critical care nurse…what is the point in*
>
> *having a DONC if I am still being deployed?"*

The identification of aspects within the NTC construct through focus group

discussions, enabled participants to identify deficiencies in the current

framework. They concluded that DONC was only a part of the solution to

the assurance of overall nursing competence but offered little by way of a

potential solution.

A further area of consternation for the group was set in what is seen as the

subjective nature of military nursing personnel assessment. In terms of the

military appraisal system, there was the commonly held view that nurses

were frequently assessed against unclear criteria abstract to their nursing

performance, with little by way of a consistent construct to draw from. The

majority of members within the group were responsible for writing reports

on others and all were recipients of military appraisal reports. Although

participants were acutely aware of the military aspects of their role and the

need to reconcile these with the nursing, they felt the inconsistent approach to assessment based on the views of their reporting officers added to the challenge of writing and receiving reports. Furthermore, reporting officers being subject to change because of posting, deployment or internal personnel movements added to the inconsistent approach to reporting.

> **P07: "***There's no consistency across, well across individuals, [reporting officers]. There's always that subjective element, isn't there?*
>
> **P08: "…***we pointed to earlier on the OJARS or SJARS are subjective and it [quality] depends on who writes in them."*

One participant (P016 below) noted their concerns when giving reports reflecting a drop in performance or where a reporting narrative the subject does not agree with. They articulated this frequently resulted in accusations designed to force change in their annual reporting process. Having a framework to support the reporting process would not only give a handrail to detail the narrative but also give some clear criteria to manage the expectations of the subject.

> **P016: "***So, when they come in front of you, they call you a bully, they call you somebody that puts them down you they say you're discriminating against them, you're*

picking on me, you're singling me out when you're

entirely not. But that's their interpretation… A framework I

think gives you something to fall back on in the sense

that it's that framework, that's the guidance, the

framework has a something to kind of go to it's it that is

then the thing that objectifies it so the framework

objectifies it [the process] …"

This view of subjectivity and lack of process also infiltrated views on training and development in NTC. The commonly held view across all groups, represented in the quote below, was that training is highly focused on technical skill whether military or for the clinical setting. Little attention was paid to support the development of NTC in either space.

P019: *"…I don't think the military supports us to do it very well [non-technical skill], because we don't develop those responses and these non-technical skills."*

This was further reflected by P016 who lamented the lack of training opportunity in neither the clinical nor military space and worsened by the lack of exposure to roles in the non-deployed setting which would support development in preparation for operations.

> *P016:* "What courses, do we really have that exist already, that would enable us to go like that, we could go on and say, 'Oh, on that course you're doing this [NTC] session'. I mean, I can't even think of like, for example, the entry officer course, you know, as in clinical focus courses, we can list off things like the MA [Military Analysis] modules, the MK [Military Knowledge], JOTAC [Junior Officer Tactical], but even on that, and it can really include that they're not all those. So these are things that are unique to us our workforce in the environment that we work in the so what courses exist?"

The discussion in relation to metrics and assurance was driven by the current lack of identified standards, the subjectivity of reporting and how unfit for purpose DONC as the only military nurse competence tool. Although there were several areas identified within the construct, participants were unable to identify a specific alternative model to support or guide the assurance process.

5.5.2 Exposure

The development of military nurse NTC through exposure was inextricably linked to the contextual aspect. Of the three axial codes identified (see table x), the opportunity to practice and develop the necessary skills to grow NTC was considered the most important by the groups. This discussion is largely captured within the contextual findings reflecting the

environments in which military nurses deliver their clinical roles. However, there were some distinct codes to emerge which deviated from the environmental and contextual challenges already discussed. Participants felt these were more related to gaining exposure to the right opportunities to develop NTC, as well as the attitudinal aspects of encouraging staff to buy into this process when the operational pace is low. The outcomes of this were based on trust in the chain of command, both within unit and the wider headquarters, to facilitate access to opportunities and expectation management when these do not materialise.

When asked, participants viewed the provision of opportunities for development as vital to maintaining motivation in their roles as military nurses and their NTC:

> **AH:** *"So the exercise opportunities are equally important in terms of keeping people interested?"*

> **P023***: "Yeah, absolutely."*

> **P019:** *"Yeah."*

However, this was counterbalanced by a growing reluctance viewed across all participant groups of personnel to take advantage of what opportunities do become available:

> *P016: "…we've got people going to BATUK [British Army Training Unit Kenya]. The trawl came out, I think, for only three people. And we've managed to get, out of all the JHGs, we've got two on it. So, three people for corporals across all the JHGs you kind of have to go wow! Again, that's the chances on a percentage must be less than, I don't know, less than 2% or 3%..."*

In addition to the already identified contextual challenges for development, concerns for participants within exposure centred on the low operational pace and the limited capacity for specific exercises. This meant that many participants, as line managers felt they had a responsibility to manage the expectations for junior staff but more frequently those who were new to the Service.

> *P016: "…but also its their expectations. There will be some that grab those opportunities of service life, and others will turn around and say I did only one deployment in ten years and that will be their service journey…"*

This led to the groups observing that it affected their role performance, attitudes towards meeting Service training and clinical requirements, and the overall resilience of some nurses. The view across the focus groups was that some British military nurses had become comfortable with the low operational pace and happy to work without the pressures of impending

deployment or exercise. In others the low level of operational pace was a source of considerable frustration; they had joined the military for opportunities to deploy or exercise which were not there. This was compounded further by limitation imposed on them by their NHS clinical settings and resulted in a degree of boredom.

In some respects, participants argued this directly influenced the attitudes of nurses towards preparation for operational deployment.

> **P017: "**To be honest, at the moment, we are struggling
> with our newly qualified nurses to even be nurses, let
> alone asking them to deploy…"

These amounted to a strongly held view that some military nurses had become 'civilianised'. The limited exposure to develop NTC within the military context driven by the reduced operational pace was worsened by the limited access to opportunities within the civilian context. Consequently, without robust prospects to develop NTC and wider nursing skills, military nurses felt they had the worst of both settings. This, with sparse opportunities for wider development, which were seen as driven by individuals rather than the organisation, resulted in a low level of trust in the DMS for the development of nurses for their UK and operational roles.

5.6 Conclusion and Emergence of Context as the Core Category

The identification of three very strong selective codes firmly grounded in the data, gave a clear indication that British military nurses viewed competence from multiple perspectives. Much of their experience with reviewing competence was based on the technical aspects of skills delivery rather than the more ethereal elements associated with the non-technical. This was driven largely by the risk averse health care setting in which they worked, where the consequence of poor skill application presents real patient danger. However, the opportunity to explore other aspects of NTC generated discussion where they were able to explore wider considerations of the nursing role in both the operation and non-deployed space. Across all focus groups, participants demonstrated an incredibly strong identity which was rooted in the challenges they face on operations. This influenced the structure of any framework as well as the means of assurance. Furthermore, their lack of perceived opportunity within the NHS served to galvanise them as a group, strengthening this identity with the issues being reported across the spectrum of focus groups.

Throughout analysis of the data, contextual application of competence emerged early on and drove much of the discussion across the entire sample. Having emerged early with the first of the focus groups it then rapidly strengthened as the groups progressed. Consequently, context was identified as the core category binding all three selective codes together.

Indeed, the how and what of British military NTC competence was strongly motivated with the where and when.

Corbin and Strauss (2015) term the core category as the centre point of an integrated web of wider themes and categories. They went on to note the core category should not only reflect the underpinning theory but be sufficiently abstract to generate future research. As the major theme of the study this forms the platform to present the findings as a theoretical structure. Glaser (1978 p.131) described this as the 'funnel down' approach, a method by which the core variable is then focused on specific aspects to present the theory.

Within this study context served as the 'golden thread' linking the conditions in which British military nurses worked to the construct of the NTC being used and the way in which it can be conducted to ensure appropriate assurance and exposure. As the most consistent element of discussion, focus on context in relation to the other aspects supported the free development of a relational theory (see chapter 6). It also reduces the risk of any perceived 'force' being applied. Aligning with the view of Corbin and Strauss (2015) the core category was identified as having the power to reconcile other themes, pulling them together as part of a coherent theory.

The early identification of the importance of context meant that it became a central feature of the investigation. As the core category in this study, it

broadly links the properties identified by the four focus groups. In doing so,

it recognises context as not only the most frequent aspect discussed by

participants but as the 'golden thread' binding all categories together.

Indeed, the discussion of the conditions, construct and conduct of NTC

could not be discussed by any of the focus groups without providing a

contextual backdrop. This demonstrates further that context was the key

driver for all groups and informed how they perceived competence within

the military and clinical health care settings.

CHAPTER 6 - Discussion

6.1 Introduction

The discussion generated by the participants across all four focus groups identified multiple aspects of non-technical competence and how this is integrated into clinical roles in the UK and on operations. The emergence of the 3 selective codes (conditions, construct, and conduct) from the discussions gave structure to the ways in which British military nurses perceive competence. Their views collectively suggest that no one area can be considered individually when exploring the idea of NTC: there is a need to understand where personnel are working, what skills and competencies are required, and a means by which these can be assured to give the best possible care in challenging settings. However, across each of these selective codes the core theme of context repeatedly emerged to drive how these aspects of NTC were framed. There was a clear difference between the roles played in the non-deployed and operational spaces. The perception of being shackled by the civilian environment and contractual elements beyond their control combined with a lack of continuity between units, led to considerable frustration across each group. This appeared to reinforce the already strong sense of identity associated with being British military nurses. Indeed, the comparative freedoms of structure and action within the deployed setting served to further reinforce context as the 'golden thread' binding all three selective codes together.

The desired outcome for any GT methodology is the generation of a comprehensively integrated theory to explain the phenomena under investigation (Birks et al, 2019). The identification of a tripart structure held together by a contextual core demonstrates the generation of a substantive theory, discussed in more detail below, which explains the phenomena of NTC in relation to the British military setting. In doing so, this study generates an approach to British military nursing in a way that has not previously been considered or applied to the development and assurance of the workforce.

However, deeper exploration and synthesis of the data, also highlights large swathes of the emerging theory as being broadly applicable to other professional areas. The three selective codes driven by contextual application leads to the development of a further formal theory which considers competence in more general terms in a way not captured across existing research. This first part of this chapter brings together the codes to have emerged in the findings into a coherent structure to substantively theorise the phenomena of NTC in British military nursing. In the second part, it will discuss the further formal theoretical structure which enables application of a competence model in broader terms to areas outside of the British military nurse setting.

6.2 Substantive Theory: A British Military Nurse Contextual NTC

The generation of the substantive theory in this study is firmly grounded in the data and selective codes identified by the focus groups. This is further supported using literature beyond the initial review as a further data source (Corbin and Strauss, 2015). The resulting theoretical structure combines all three selective codes, held together by context, to form a new model for British military nurse NTC. The dearth of existing research into NTC for British or indeed wider military nurses, identified the limited approaches taken to date. This demonstrated both the lack in understanding conceptually of NTC and the space in which a new model could appropriately occupy to improve training, development, and assurance processes in the improvement of deployed nursing care.

Across all participants and broadly in the literature, competence was seen as a fundamental element of clinical practice. Being competent or perhaps more so, the consequences of not being competent, were considered drivers in ensuring military nurses are fit for purpose. However military nursing, by its very nature and the heavy influence of personal interaction, environmental complications, or frequency of emotive situations, mixed with technical skill, is a complex function. Consequently, any associated competence is equally challenging to comprehend. Even regulatory bodies such as the NMC (2018b) are unable to clearly articulate requirements for competence, much less create a structured and understandable approach

for NTC. Together, these factors have created a 'conceptual void' in which British military nursing competence sits resulting in no academically based guidance on which to base future development.

The views of the focus groups reflected competence as a complex and nebulous process. The Corbin and Strauss (2015) coding approach identified three clear components to the substantive theory of military nurse NTC:

1.   Whether being used by British military nurses in the UK or on operations (conditions).

2.   The structured domains of British military nurse NTC with the associated competencies and skills (construct).

3.   Opportunities for measurement, validation, and development of practice (conduct).

Each of these three aspects were underpinned by context. Influenced by the conditions, context served to shape the how the construct and conduct of competence is applied. However, the dynamic nature of context meant that participants viewed it as changeable moment to moment, fuelled by the nature of the situation being experienced at that time rather than being the conditions in which they were working.

Application of these lends well to the visualisation of the substantive theory. Figure 8 demonstrates the triumvirate of NTC components which military nurses considered requirements of competence. Context infiltrates through all three elements informing what domains of competence may be required for the conditions, how they are applied and means by which they can be measured. However, evidence from both the findings in this study and the existing literature endorses the view that one is unable to view competence in its entirety without considering all aspects collectively. Whilst context is the main driver throughout, this model proposes a synergistic relationship between all three aspects. Furthermore, it poses that one cannot be considered competent without meeting the needs of each category. For example, British military nurses may be able to function within the NHS, but their requirement is to provide nursing outside of 'normal' domestic circumstances. To do so, they must have the relevant skills, knowledge and understanding to successfully function.

The contextual core of this substantive theory centres on the way in which military nurses view themselves and reconciling the settings in which they work. Much of this stems from the multiple and frequently challenging environments as well as balancing their roles as carers with being members of an armed service.

Figure 8. Substantive Theory Model for Military Nurse Competence
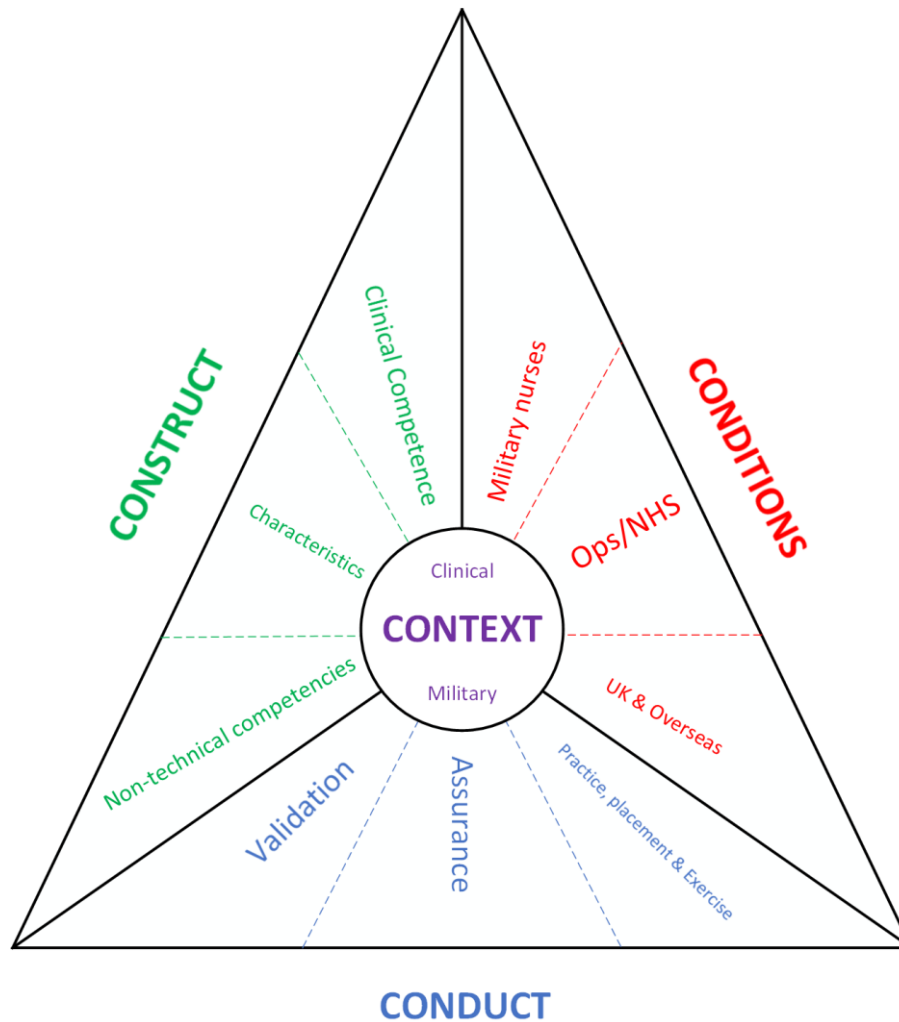
Building on the initial considerations identified by Ma et al (2021),

participants supported three elements for contextual considerations in their

roles:

1. Recognition of the unique demands made of British military nurses and the contribution to the wider nursing community.

2. Working within the NHS with civilian colleagues to meet the challenges faced in the domestic setting, whilst meeting the roles and responsibilities of the military.

3. Application of NTC skills to the operational and deployed setting with the associated pre-deployment training and preparations.

Within a military context Ross (2010) discussed the need for military nurses to have patient care skills which match the patient population, the environment and mission as well as leadership capabilities which reflect wider military roles. This point was broadly reflected across the participant group and echoes points from Conlon et al (2019), who concluded military nursing officer identity was constructed around the uniqueness of their deployed role, the environments they work in and their leadership function in both clinical and military contexts. Evidence in this study certainly suggests that the roles of British military nurses in the UK setting diminish their military identity and affect their professional identity through not allowing their deployed experience to be fully maximised in their NHS roles. Whilst it is expected that British military nurses will deploy to combat settings, the increasing use of military healthcare in disaster relief, whether natural or man-made, diversifies the use of military nursing. The findings in

this study reflected stronger views in British military nurses with experience of these settings and the challenges faced when switching from warfighting to wider healthcare roles in the deployed setting.

Rivers and Gordon (2017) argued there are commonalities between different operational deployments such as the emotional challenge, encounters with death and loss and, the need for both team and command support. They also noted considerable differences with disaster relief largely centred around the lack of a structured environment associated with military action, a much broader patient group frequently including older adults and children, and the consistent nature of clinical activity contrasting to military action which was often operationally dictated. All these place complex demands on the knowledge, skills and competencies required for the roles adding to the difficulties in defining military nurse competence and add to the needs of British military nurses, identified by the focus groups, to build a diverse base of contextual experience prior to deployment. Military nurses often find themselves balancing their role as a nurse with their role as a military officer or soldier (Ma et al, 2021). Kraemer (2008) elaborates noting that this is a complicated issue. Whilst many would assert the nurse comes first, she argues that the soldier role is primary, requiring a strong base of military skills and knowledge to operate safely and effectively when deployed. She goes onto note that military routine becomes normalised when working overseas; nurses quickly become accustomed to wearing body armour, carrying weapons and ammunition for

self-defence as well as the sights and sounds associated with demanding settings. Operational deployments are diverse, frequently dangerous and lack many of the technologies and comforts associated with healthcare delivery in the home setting (Agazio, 2010). Conlon et al (2019) reported military nurses frequently experience psychological hardship based on the severity of injury, youth of the patients, or the possibility of injured soldiers being returned to the combat environment where injury or death are an ever-present risk. Additional pressure from the decision-making process regarding treatment rules of eligibility or resource allocation based on military necessity, add a further tier of challenge. Such 'non-normal' situations are highly demanding and often lead to complex ethical situations which many military nurses feel unprepared for the challenge to their ethical code (Ma et al, 2020; Agazio and Goodman, 2017). Griffiths and Jasper (2008) argued that all these factors in combination, places military nurses at risk of experiencing the phenomena they describe as 'duality'; a dual loyalty conflict which tests medical professionals in a way not done so in the civilian setting (Agazio and Goodman, 2017). This sense of duality described by Agazio (2010) as balancing of their roles of soldier and carers appeared to be magnified when considering their military roles with their work in the civilian setting. This consideration is particular to the British system and not factored in by Agazio (2010), who's research was undertaken in the American military health sector, which is independent of civilian care delivery.

The strong contextual driver throughout the discussions informed the commonly held view that military nurses needed to be competent for role, regardless of the setting or conditions in which they work. Furthermore, the demands, clinical and military, placed on them served to reinforce their identity, distinguishing them from their civilian counterparts. Whilst this was clear amongst the military clinicians, they held the perception that this was less so amongst their civilian counterparts, particularly within the clinical setting. This was despite the DMS having moved into the NHS more than 20 years ago. When exploring their clinical preparation for deployment, they widely reflected the findings of Finnegan et al (2016) and Beaumont and Allen (2012) of feeling underprepared for operations. However, this study also identified a deeper sense of frustration amongst the participants working in the NHS. Within all focus groups, this was born from not being able to use their experience and skills to help to their full potential, the worry of not being able to fully prepare for the roles they would be given in the deployed setting and the low levels of professional satisfaction. This was compounded further by seeing recent military retirees employed within the NHS in senior roles not available to British military nursing personnel. The groups attributed this to two main issues: the nature and understanding of the contract for nurse placements and the lack of NHS understanding of their military roles and experiences.

The first issue centred particularly on the banding system applied to NHS employees and interpretations of the roles they could contractually

undertake when working in the NHS. There was a generally accepted value

in the bands applied to civilian nurses through the NHS KSF and Agenda

for Change (DH, 2004). Rather, British military nurses felt there was no real

matching of their experiences, skills with the banding system. Whilst the

issue of rank was briefly discussed, this was a lesser consideration than the

other factors, partially as less experienced nurses can be appointed into

officer roles (common across all areas in the three Services). The outcome

was military nurses not regularly being able to access roles, skills, and

training for band 6 and 7 level nurses which would be appropriate for their

preparation for deployments and commensurate with their levels of

experience and their expected deployed roles. The groups frequently

reported NHS clinical area managers with whom they worked, referring to

them as 'just a band 5' preferring instead to nominate civilian staff. The

focus groups reported that the differing language used between the military

and the civilian settings to describe roles and job descriptions hugely

contributed to this. Application of the NHS KSF to underpin all the job

descriptions serves to create a common language across various

professions. Although job descriptions are used within the military, these

are rarely shared with the civilian clinical areas and constructed from a

military lexicon which is not easily shared or understood. This is

exacerbated further by the requirements to maintain non-clinical, military

specific competence (such as weapon handling skills) or the need to

deploy, sometimes at short notice.

The second issue surrounded a lack in understanding of the deployed military role or command structures. All participants acknowledged that clinical skills were transferable between the NHS and operational settings. However, they felt the context in which they were being applied, wider considerations such as environmental factors and the population with which military nurses work transformed the ways in which they were applied. This was deeply founded in how NTC was being applied in the utilisation of a plethora of high-pressure situations which civilian nurses were unable to reconcile. Consequently, many of the civilian colleagues were unable to empathise or understand how to use the NHS environment to practice NTC skills to adequately prepare for the deployed setting. Military nurses were vexed by the perception of not always being valued as experienced members of the team whose experiences could help in meeting the challenges faced by the NHS. This served to deepen the sense of duality experienced whilst frustrating them at not being able to perform in the NHS to the best of their abilities.

Military nurses felt that the context in which they worked had a direct impact on the skills they would be using. Although many of the experienced military nurses would be comparable to civilian counterparts at senior grades their placement and attitudes of the civilian clinicians frequently restricted the opportunities to practice or develop NTC skills. This contrasted with deployment on military operations where the contextual setting demanded the use of an array of NTC competencies specific to the

military and clinical situation, frequently when dealing with significant levels of injury or illness. The delta between their operational and UK based roles they felt not only created a gap in their development but resulted in frustration at not being able to fully contribute their experience base learning to meeting the demands of the NHS.

Across all the findings context was viewed by participants as a dynamic concept which could change regardless of the conditions under which they were working. This may be driven by clinical workload, the nature of team composition, or change in a specific situation. In contrast, the conditions were viewed as being more static based on the environment in which participants were working. Whilst there is an undoubted impact of conditions on the contextual application of NTC, the development of the substantive theoretical model emerges with these as separate elements. The development of British military nurse NTC within the NHS conditions were viewed broadly as an enabler for the operational setting. Furthermore, the application of NTC components of the construct, discussed below, were largely seen as the same regardless of the conditions. It was the situational context which directed the way in which they were applied.

Although context is generally viewed across the literature as a key component for competence (Vitello, 2021), the specifics required have rarely been considered for the competence for British military nurses, particularly when understanding their non-deployed role. The model

emerging from this study goes some way in addressing this delta. Ensuring competence requirements meet the demands of the conditions in which they were working was widely reflected across the focus groups. However, there was also wide agreement amongst participants of a disconnect between the non-deployed and operational aspects. This served to undermine their contribution to the NHS, their preparation for operations and their own sense of career satisfaction. This resulted in the strong view that any coherent approach to British military nurse competence needed to reconcile all the conditions in which they were employed to give the greatest opportunity to maximise their operational and non-deployed roles.

6.2.1 Substantive Theory: Construct

The substantive theoretical construct emerging from this study showed there were three key elements to NTC for military nurses: emotional intelligence, communication, and leadership. Each of these were considered intrinsically linked to one another and were supported by several competence characteristics. Although the technical aspects of the nursing role were not a consideration of this study, there was a strong influence on the broader understanding of what it is to be competent. Consequently, this was considered an enabling aspect of NTC underpinned by knowledge, experience, and credibility. Indeed, the use of technical competence by the individual and those they work with, is heavily influenced by application of NTC through skill selection, working with others

and understanding of application. This means that technical competence cannot be ignored entirely and use of NTC is equally linked to many aspects of technical skill. However, the specific detail of technical competence is not part of this study and will therefore not be discussed further at this stage.

The substantive theoretical model discussed in the previous section allows visualisation of all the aspects combined into a single coherent picture. However, within this, a practical construct for NTC and its relationship with the technical elements emerges (figure 9). Based on synthesis of participant data, this broadly conforms to Woodruffe's (1993) assertion that competence can is frequently viewed as a structure composed of behaviours and competencies. Although based on application of central aspects of NTC, it reinforces British military nurses' movement to competence based on application of knowledge and experience. This substantive construct is built using the axial and selective codes identified in the data (see table 12) and represents what participants considered to be the practical application. Each competency is conceptually underpinned by related open codes which form the basis of the corresponding skill set. However, it is beyond the scope of this investigation to explore the skill clusters of each competency and how they may be used or measured. Rather, this section will explore the core identified construct through the competence domains of emotional intelligence, leadership, and

communication along with the general characteristics participants felt were

necessary for the successful acquisition of NTC.

Figure 9. Military Nurse Competence Construct.
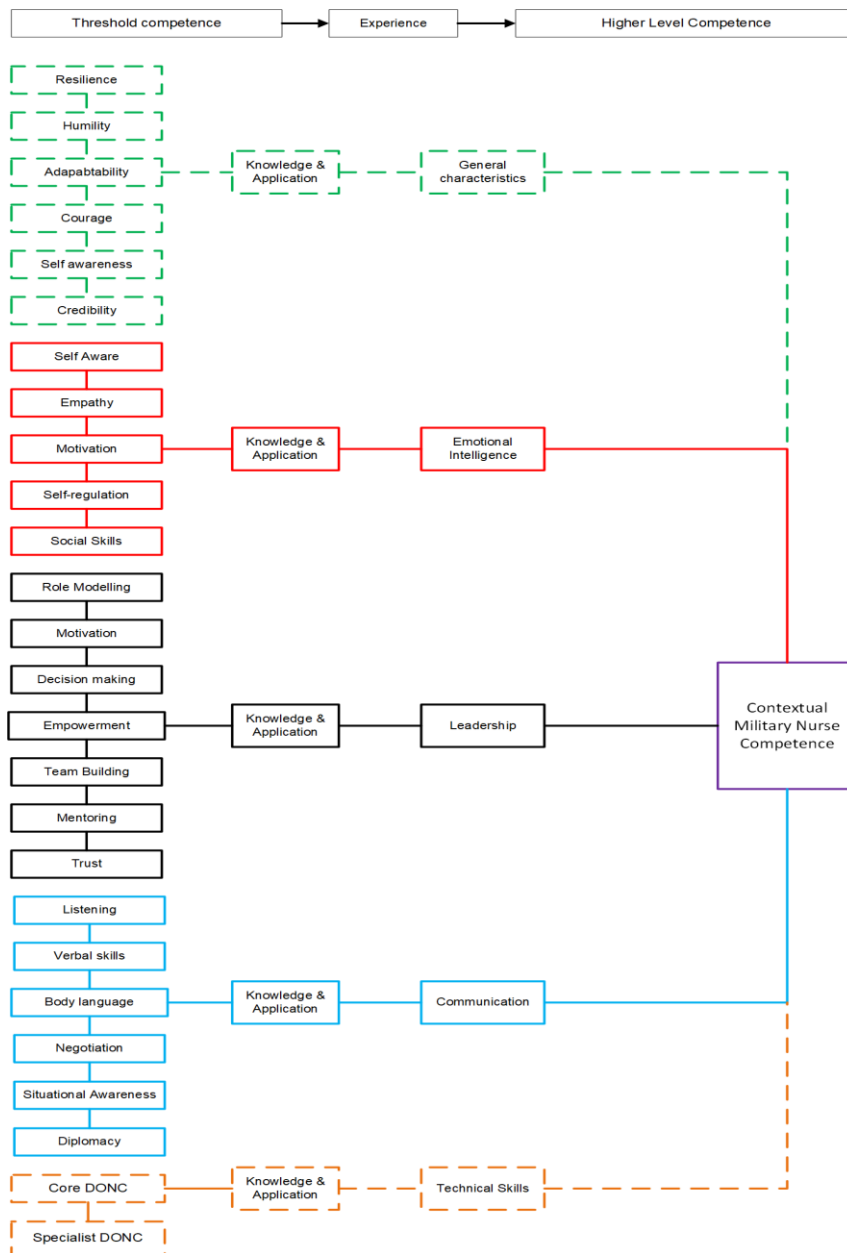
6.2.1.1 General Characteristics

All the Focus groups identified a series of core characteristics which supported the notion of being a competent Military nurse (figure 9). Interestingly, the groups did not necessarily view each of these as competencies or skills but rather aspects of military nurse NTC which enabled them not only to successfully function in their respective environments, but to support the development of further NTC. Whilst the idea of such characteristics is not unique to the discussions within this group for military nurses, academic research into them is sparse. In their research into Army nurse leadership, Funari et al (2011) identified several traits associated with military nurse leadership many of which were also identified within the focus groups. Adaptability, clinical credibility, and resilience were all discussed within the groups and strongly associated with military nurse NTC. Indeed, Funari et al (2011) argued that these are the core characteristics which enabled military nurses to view problems and challenges from different perspectives and create workable solutions, regardless of the setting. In addition to the characteristics cited by the groups, Funari et al (2011) added influence to their list. Whilst this was not specifically cited by the focus groups in context of a characteristic of NTC, it was alluded to in the discussion surrounding leadership.

Finnegan et al's (2016) constructivist GT study of British military nurses' characteristics and values also defined both clinical leadership and team

building as central characteristics. However, the lack of clarity in the study

carried out by Finnegan et al (2016) in nomenclature provides a messy

picture which confuses characteristics, values, and traits with no mention of

competence. In contrast, this study views characteristics as enablers of

non-technical competence. In doing so, it has identified resilience, humility,

adaptability, courage, self-awareness, and credibility as those

characteristics military nurses require to achieve the three central

competence domains, which are driven by the context in which they are

being used. The result is a new clear structure which demonstrates the

value participants place on personal characteristics and the relationship

they share with achieving British military nurse NTC.

6.2.1.2 Emotional Intelligence

Across all focus groups Emotional Intelligence (EI) was consistently raised

as an aspect of military nurse NTC. The paucity of research within British,

and indeed wider military nurse research setting, demonstrates the

inclusion of EI within the NTC framework something previously not

captured. This could be reflective of the difficulty that participants had in

defining what EI was. However, the idea of emotional intelligence is not

new and has become popular in workplace thinking over the past three

decades (Kotsou et al, 2018). Its origins though sit further back and are

rooted in Thorndike's (1920) social aspect of multiple intelligences. He later

described social intelligence as *"the ability to understand and manage*

people" (Thorndike and Stein, 1937 p.275). As understanding of the role of emotions has been explored further, this has been refined and developed for both business and social constructs to become what is now termed as emotional intelligence. In their seminal work Mayer and Salovey (1993 p.433) define emotional intelligence as

"…the ability to monitor one's own and others' emotions, to discriminate among them, and to use the information to guide one's thinking and actions."

They considered EI to be a type of social intelligence which enables one to function and work with others in any given situation. In applying the term intelligence, they argue that emotional information is frequently imbedded in intellectual challenges and problems. To successfully navigate such issues, it is necessary to process this emotional data and in doing so results in a different approach compared to when this processing does not occur. Salovey and Grewal (2005) went on to note that EI has a significant role to play in forming social relationships and achieving success in the workplace. Interestingly, Mayer and Salovey's (1993) discussions on EI steered them away from use of emotional or social 'competence'. Instead, they utilised 'intelligence' to a reflect mental aptitude not entirely divorced from intellect but also one not based on meeting specified criterion. However, they equally noted that linking the ability to read and adjust emotions in oneself and others to more 'traditionally' measured intelligence could be viewed

controversial. With the growing popularity of EI in the literature, other authors started to elaborate and further popularise the original ideas.

Goleman (2006) developed these thoughts to include the use of emotions not only to guide oneself but to help in the management of relationships with others. From the resulting discussion Goleman (2006) identified three EI models: the ability or intelligence model, the personality trait model, and the mixed model, comprising of elements from the first two. Across each of these there is considerable overlap and influence from all the models on each other leading some to conclude there is little wonder why the term EI has little granular understanding or clarity as to what it should be (Raghubir, 2018; Miners and Hideg, 2015). Offerman et al (2004) add that much like IQ, the presence of EI does not by any means guarantee success. They went on to note that whilst EI is a necessary element for achievement across a range of environments, alone it may not be sufficient to predict how people behave in complex environments such as those experienced by military nurses. Indeed, research has shown only mixed success for the testing of EI which has continued to invite scientific criticism (Miners and Hideg, 2015). Despite all the challenges to empirical measurement and creating a universally accepted definition, Dolev and Leshem (2017) argue that many view EI as a valid lens through which human behaviour and interactions can be viewed.

Notwithstanding some of the critical analysis, the concept of EI continues to wield some power in terms of how people view their dealings with each other, particularly within the workspace. Indeed, the importance of EI was identified across all four focus groups. However, despite being raised as a key aspect of NTC, there appeared to only be a cursory understanding of what it is and how it can influence the working environment. The resulting deeper exploration within the focus groups, participants revealed several competencies that thought were central to this competence domain. These included: self-awareness, empathy, motivation, self-regulation, and social skills and were broadly consistent with Boyatzis, Goleman and Rhee (2000) who noted several traits under five broad category clusters:

1.   Self-awareness: emotional awareness, self-assessment, and self-confidence.

2.   Self-regulation: self-control, trustworthiness, conscientiousness, adaptability, and innovation.

3.   Motivation: drive, commitment, initiative, and optimism.

4.   Empathy: understanding others, developing others, service orientation, leveraging diversity and political awareness.

5.   Social skills: influence, communication, conflict management, leadership, change catalyst, collaboration and cooperation, and team capabilities.

The focus groups also related the subjectivity of understanding EI with the challenges in assessing and assuring it. Boyatzis, Goleman and Rhee (2000) viewed each aspect within the listed categories as competencies reflecting the broader language discussed in both the literature review and the finding of this study. However, in line with the overarching elements of competence identified in this study, they found that much of the application was driven by the context in which it was being used. The reactions of the individual and the application of each skill results in adaptability to use multiple skills or those best suited as driven by the stimulus and resulting situation. They also noted a competition between each skill which led to either an antagonistic use (where one may override another, e.g., self-control vs drive) or a compensatory use where one skill makes up for a shortfall in another.

For British military nurses the use of EI requires a reconciliation of their military and nursing positions as well as their work context, whether UK non-deployed or operational. Indeed, this may extend into contextual application when working with international partners. Of these, participants highlighted working in the NHS has providing some of the greatest challenges to their EI. McQueen (2004) articulates that EI is an essential

nursing aspect which crosses roles of carer, leader, and manager. She went onto note that EI's role in relationship building, understanding others and helps in conjunction with general intelligence to enable nurses deal with complex problems in a variety of settings. The development of mutual understanding enables nurses to develop relationships with both patients and colleagues. This is caveated with EI developing as one becomes more experienced to enrich the foundations on which it is based. However, there is a distinct lack of literature relevant to the British or any military nurse environment for participants to draw upon. Use of data from the participants with data from wider existing literature, the EI aspect strongly emerges.

The resulting structure, in this study, based on both literature and the participant information gives a set of clear skills enabling understanding for both the individual and organisation of what is expected when applying EI to the British military nurse setting. Once again, the contextual situation underpins the learning and use of each competency. Indeed, the ability to seamlessly work within military teams or with civilian counterparts was driven by the EI applied to the situation and transferred through leadership and communication.

The overlapping of competencies such as motivation, in this new NTC structure evidences the interrelated nature of the core domains in this model and the unique, contextual approach to British military nurse NTC. Reviewing a leadership dimensions questionnaire and the military appraisal

system, Dulewicz et al (2005) demonstrated that whilst IQ and EI are intrinsically linked, EI makes a greater contribution to successful management. Furthermore, EI had a greater role to play amongst officers than non-commissioned ranks who utilised the associated skills to get the best from their teams. Indeed, the notion of influence of EI on other aspects such as leadership demonstrated in this study, is supported by Miners and Hidig (2015), who assert that use of EI can help people to decode others and lead, even if not in a position of authority.

6.2.1.3 Leadership

Nursing leadership is by no means a new subject or aspect of nursing, there is literature abound regarding how it can be delivered. The recently reviewed RCN definition of nursing considers leadership an independent pilar within nursing structures (RCN, 2023). Heinen et al (2018) conducted and integrated review of the literature identifying more than thirty articles specific to nurse leadership with leadership domains built on specified skills, knowledge, and attributes. This approach is further supported by Hughes et al (2022) who noted nurse leadership as being based on knowledge of healthcare, leadership skills, professionalism, business principles, innate leadership abilities and communication and leadership. The division of leadership into attributes is commonplace and certainly reflected in the outcomes of the focus groups.

Within the military setting, leadership has long been a mainstay of training, regardless of specialist skills or the area in which personnel work. This was reflected across all focus groups with high levels of discussion around the contribution of leadership to NTC. The British military uses multiple processes for training and development ranging from those for new officers at the Royal Military Academy Sandhurst to the advanced training through the Defence Academy. However, each approach is underpinned by a set of core principles. The Army identifies these collectively as the Leadership Code (British Army, 2015) which includes:

1. Leading by example.

2. Encouragement of thinking.

3. Application of rewards and discipline.

4. Demand for high performance.

5. Encouraging confidence in the team.

6. Recognition of individual strengths and weaknesses.

7. Striving for team goals.

With leadership an intrinsic function of the military role it is perhaps unsurprising that the value placed on leadership was high. Leadership within the military is designed to ensure teams can function under the most demanding of circumstances. This was reflected across the focus groups who drew on operational and demanding UK experiences. At the core of this is trust based on all personnel sharing the same values and standards to ensure that the job is done. Based on both transformational and transactional leadership approaches, the Army states that the leadership code embodies these values and standards to create a high performing physical and mental environment. This in turn enables the organisation to gain the best from all team members in meeting the collective objective. This approach to leadership is also used by the US Army who cite twelve principles of modern military leadership (Roberts, 2018). Similarly, these are built around leading by example, having courage and determination, fostering the abilities from within the team and ensuring team members or suitably supported.

The competencies noted in this substantive model were driven by participants application within the British military nurse setting. Whilst the competencies identified include role modelling, mentoring, team building and, trust, are not necessarily unique to leadership models, their contextual application to British military nursing is. Participants widely argued that the challenges faced by British military nurses in both their operational and non-deployed roles, required the application of leadership skills in a

combination not found elsewhere. Indeed, this is reflected in the paucity of literature relating leadership as part of specifically military nurses. This further supports this construct's unique assertion of EI to create insight into personnel and communication to express leadership functions as interrelated processes.

Roberts (2018) notes that failure in any aspect of these can have a devastating impact on both the function and morale of the military team. By applying these in a complete manner, leaders can successfully navigate their teams through the deeply challenging situations in which they may find themselves. During their exploration of Army nurse leadership in the US, Funari et al (2011) identified that military nurses had to be adaptive leaders, a theme strongly supported by the participants in this study. Possessing a level of adaptation enabled nurse leaders to function across both vertical and horizontal organisational structures in either home or austere deployed settings. By having a deep understanding of the strategic and tactical requirements, Army nurse leaders can holistically see problems and turn ill-defined challenges into opportunities. In doing so, the military nurse leaders are then able to relate to those around them, both senior and junior whilst meeting strategic, operational, and tactical objectives.

The creation of a learning environment for British military nurses in which they could develop the skills necessary to lead in the UK and on operations was an important consideration across the focus groups. They echoed the

views of Funari at al (2011) in believing that support for the development of leadership skills is entrenched at all levels and should begin at the earliest opportunity. Early exposure to the skills required of leaders and placement into situations enables junior British military nurses to develop the competence necessary to lead in the future. The focus groups also advocated building a safe environment in which juniors can be supported appropriately with mentorship from more experienced personnel and the opportunity to use the skills they are likely to require in the operational setting. They argued that the identification of relevant competencies in this construct with contextual guidance could help support the development of a leadership skills base relevant for British military nurses. However, they also lamented the lack of such opportunity with the restrictions placed on their roles by either the contractual agreements with the NHS or the reluctance of their civilian counterparts to invest time and effort into the process.

Most focus group members were either senior non-commissioned personnel or officers, all of whom are exposed to such leadership training and challenges on a regular basis. Whilst all reflected aspects to varying degrees of the Leadership Code, there was acknowledgement of differing leadership approaches within the NHS and the ways in which this influenced their personnel. There was also a tacit consideration that due to the professional nature of nursing, within the military this presented some leadership challenges not necessarily found in other non-clinical areas.

This was particularly emphasised with the rank structure in which an officer, whilst having a leadership function, may not have the same level of experience as a junior rank. Furthermore, there was general agreement across the groups of the lack of value placed in their leadership abilities within the NHS. A source of particular ire was the commonly held view that military nurses were only given the opportunity to perform in clinical leadership roles (shift or departmental leads) when it suited their civilian clinical setting such as when they were short of their own staff or needed to spend additional budget for bank/agency workers. This was though caveated by AMSTC who noted senior regional elements within the NHS seeking advice and training from them on the operational management of major incidents within the UK.

Although focused on US settings, there is evidence to demonstrate the positive contribution that military nurses can make to the civilian setting. Chargualaf et al (2018) argued that military nurses are an untapped leadership resource which should be embraced by the civilian academic world. Additionally, Lake et al (2016) strongly advocated for the use of military nurses within the clinical setting. Both studies identified military nurses as having not just highly valued leadership skills but an array of wider attributes which could serve to drive nursing forward. Outcomes of both were based on the experience and training military nurses can tap into, the ability to see problems in a different way enabling innovation, interprofessional expertise and broad technical competence. Sidenbald

(2022) adds that clinical military leaders can positively influence beyond their direct chain of command, lead by example, and effectively communicate to create a positive work environment focused on delivery of high-quality patient care. They went on to note that not only was there value placed by the team in the role of leader, but the trust leaders placed in the performance of their role as competent practitioners. Within the context of trauma and resuscitation, they argued that military leadership not only added value to the civilian setting but demonstrably contributed to the reduction of treatment time and improvement of outcomes, even when part of an inexperienced team.

6.2.1.4 Communication

Communication was seen across all participants as a vital aspect of the British military nursing role. Perhaps a little surprisingly, there was minimal specific mention of communication with patients. Rather, much of the focus was set on how military nurses communicate with other military professionals, civilian counterparts, and consideration of the setting in which they were working. In their study of nurse-patient interactions Kwame and Petrucka (2021) identified a plethora of research studies highlighting the importance of communication in the delivery of nursing care. Indeed, they emphasise the requirement for nurses to engage with patients and their families throughout their journey and that failure to do so directly impacts outcomes and experiences. With the high level of existing research

into nurse-patient interaction, this study accepts the importance and existing processes involved in the nurse-patient relationship. As the participant focus is firmly on interprofessional communication, this discussion section will explore this issue.

Communication is broadly viewed as the exchange of information and the creation of shared meaning and understanding between individuals or groups (Royal College of Surgeons of Edinburgh, 2019; Bottomly and Pryjmachuk, 2019; Nzelu et al, 2018). Whilst communication skills in general and nursing terms are widely covered in the literature, there remains almost nothing on the communication between military nurses and their civilian counterparts. Some participants identified the differing language and styles between civilian and military personnel as partly responsible for this. Saber (2018) comments that specific jargon and language plays a significant role in military life and distinguishes personnel from civilians. He identified six roles of this ranging from expression of humour, expression of stereotypes and negative aspects of military life to team bonding. Together, he argued these roles separate military jargon from the normal referential process of slang development in civilian sectors. In developing a unique lexicon there is reinforcement of the military identity and contribution to social cohesion of military teams, a vital process when dealing with challenging deployments. The challenge for personnel in this respect is how military nurses work within civilian teams in their non-deployed roles or NGOs. Despite British military nurses working in the

civilian clinical setting, the use of language and communication techniques

appropriate to the military teams was broadly reported by the participants

as commonplace. Indeed, application of accuracy, brevity, and clarity

underlies much of the communicative process and style. However, this

challenges military nurses to find an effective way to achieve what Saber

(2018 p.15) refers to as 'lexical code switching', the movement between

one set of terms to another. Where clinical communication was broadly

comparable between the military and civilian, military terminology within the

non-deployed setting had to be refined when talking with civilian

counterparts. This though, could be seen as a communication barrier

between the two groups and perhaps could have contributed to the

dissonance between the civilian and military nurses.

Communication for military nurses though is not limited to the NHS and

clinical setting. This further challenges military nurses to ensure their skills

reflect the context of the situation. Indeed, the more experienced members

of the group widely reported operational experience where they worked

with international partners and groups. The growing level of international

collaboration requires nurses to work on operations with a range of clinical

professionals from a multitude of countries. The term 'interoperability'

conjures a significant debate which is not for this study but has

connotations for the way in which British military nurses are required to

communicate in their roles. Paget (2016) argues that interoperability has

previously referred to equipment and technology but more recently has

focused as much, if not more, on the human aspects. He went onto note that this has resulted in military professional education processes which are attended by multiple nationalities to foster a collaborative mentality. Organisations such as NATO are dependent on successfully operating together to achieve common goals. Wilson et al (2017) argued that interoperability goes further and enables multiple nations to support operations that could not be sustained by a single country. Operations such as those in Afghanistan required nurses to work with multinational partners within the hospital to deliver care to patients from array of national backgrounds. More recent operations focusing on responses to natural disasters, humanitarian emergencies, or pandemics have provided the added factor of working with civilian government or non-government organisations (NGOs). Each of these require nurses to adapt their communication processes and styles for the situation.

The challenge for military nurse NTC is the contextual demands required to become the skilled communicators in the various settings they work in. Onet and Cioci-pop (2015) argued that the cross pollination of military terminology into mainstream corporate language can assist. They add that sometimes, application of such jargon during times of stress can have a motivational and empowering effect. However, military personnel need to balance this to maintain their own identity, work with civilians successfully and not dominate the areas in which they work. The aspect of the military nurse NTC construct requires application of emotional intelligence to gauge

the appropriate means of expression to the situation. In doing so, military nurses can successfully apply a transactional approach which enhances their function within the clinical setting whilst influencing leadership and clinical outcomes.

The participant groups in this study identified a series of communication NTC competencies including listening, verbal skills, body language, negotiation, situational awareness, and diplomacy. This approach to communication though, runs the risk of oversimplifying what is required to be a good communicator. In their exploration of communication, Salmon and Young (2011) argued that the concept of communication skills is inherently reductionist. They question the value of splitting communication into a series of elements. Moreover, the practical use of such skills differs from the rules set out in other theoretical models. This is further complicated by the subjective experiences associated with communication. In effect, what one person says may not be what another hears. Interpretation is based on social experience, what has been said before, the values of those involved in the communication and the context in which it is spoken. Participants in this study highlighted shared experiences with their civilian colleagues were limited to the NHS and the roles they were allowed to play. Consequently, there was little civilian insight in the operational challenges, limiting the important shared social experience discussed by Salmon and Young (2011). Consequently, participants felt

that communication skills contextually applied to the military setting needed adjusting for civilian communication.

Van der Vleuten et al (2019) add that it is a common misconception that communication skills are stable or universal. Rather communication skills are extremely context specific, and the development of expertise is rooted in practice in many different settings. This idea is supported by the findings of this study. While the competencies identified by the participants may be found in other approaches, their combined use in a variety of contexts relevant to British military nursing in the UK and on deployments is inherently unique. The notion of applying communication skills appropriate to the situation lends well to the idea of British military nurse communication being viewed as a holistic term or in this case a competence domain. This shifts the focus from communication skills to the all-round skilled communicator (Salmon and Young, 2011) which in turn is influenced by EI and impacts on leadership in the UK and on operations.

This study reinforces the contextual core theme, with military nurses effectively having to adjust their use of communication competencies depending on broad range of situations and people encountered in their UK and operational roles. It was commonly reported by participants that the high number of groups with whom British military nurses communicate with, in their various roles, created a substantial challenge, the significance of which cannot be overstated, or the effects of failures understated. DuPont

(1997) highlighted poor communication as the first issue in his human factor 'Dirty Dozen'. Although developed as a series of aviation safety posters in Canada, as with the wider field of human factors, there are several elements transferable to various other environments of which communication is the first. Poor communication results in misinformation, loss of unified purpose, and a disconnect between leadership and the wider organisation (Biggs et al, 2023). Indeed, referred to by the focus groups, the Francis Report (2013) highlighted a litany of communication failures across the Mid-Staffordshire Hospital NHS Trust resulting in sustained and systemic patient harm.

6.2.2 Substantive Theory: Conduct

All focus groups in this study identified the need for a governance structure to support the delivery of military nurse NTC, ensuring standards could be identified and met. The NHS (2021) defines governance as the process by which organisations are accountable for the quality of their services, the safeguarding standards and creation of an environment in which care can grow and excel. This process is made up of a range of aspects including audit and monitoring, patient safety, learning form practice, safeguarding and infection prevention and control. As a non-NHS organisation, the MoD and the DMS are legislatively responsible to ensure they meet the best standards possible. The process for governance and assessment within the DMS is set out in JSP950 Lft 5-1-4 (DMS, 2021) which is broadly aligned

with the NHS process. This is further supported through collective assurance of deploying capabilities. Mission specific assessment (MSA) and validation (MSV) are designed to assess collective hospital teams and systems against established standards relevant to the operational setting (Gibson et al, 2016).

The nature of the operation dictates the measures utilised. For example, for the UK Military response to the West Africa Ebola outbreak WHO policy was used to develop and refine the standard operating policies of the deploying team. This collective training and assessment then enabled the teams to be prepared physically and mentally for the rigors they were likely to face. In many cases a pragmatic approach is taken which considers many of the logistical and supply constraints faced when deploying into battlefield or austere environments, reflecting the unique contributions of military nursing care. Arie (2014) noted the then head of MSF, Joanne Liu, stating that only the military would be able to get the West African Ebola outbreak under control.

Within the assurance and governance process is the requirement to ensure that personnel are appropriately trained for the roles they are employed (CQC, 2020). Whilst the MSA process has some aspects of this, the focus is firmly on collective training and assurance. Instead, the DMS rely on the completion of the DONC framework for individual levels of assurance. However, this came in for widespread criticism across all four working

groups who felt that it was a cumbersome document which offered only partial, technically focused assurance of the individual. In NTC terms, the document is limited to managerial/command process with no consideration of specific leadership, communication, or EI aspects. The focus groups argued the levels of practice appear to be arbitrary rather than matched to a specific taxonomy or academic basis. This resulted in a lack of faith across the groups in the DONC to reflect what was needed for operations or UK based work. The resulting confusing picture, they felt added to the challenges of getting parity within the NHS as it was unclear to civilians what was actually needed for the NTC development.

Despite the issues identified with the DONC there was little offered by participants on a means by which NTC could be assessed and assured. The widespread complaints about the use of DONC without solution identifies the challenge in developing a system suitable for the military healthcare setting. Smeets et al (2022) explored the creation of a competence framework for interprofessional working in healthcare. In framing the challenges, they identified 26 separate guidelines for competence development in what they termed a relatively small aspect of healthcare training. These would need multiple assessment opportunities to realistically achieve with suitably experienced and competent assessors. Their work highlights the danger of assessment and evaluation of subjective areas such NTC becoming unwieldy and difficult to apply to the living situation. This example reflected the feedback from the focus groups

in the challenges of not only identifying competence requirements but in assessing the competencies.

Aligning with a systems-based approach, much of the little existing work on NTC in healthcare focuses on surgery and the operating theatre (Flin et al, 2017; Roche, 2016). The Royal College of Surgeons of Edinburgh (RCOSE, 2019) developed the Non-Technical Skills for Surgeons (NOTSS) framework for use in the operating theatre. Designed for use specifically by surgical teams, it identified decision making, communication and teamwork, leadership, and situational awareness as the core themes. Aiming to give a practical guide to NTC, this provides three elements for each category which can then be feedback using a scale ranging from 1 (poor) to 4 (good). Whilst it is clear to see commonalities with the themes identified in this study, this is contextually built for the operating theatre setting. There are examples of good and poor behaviours, but the scales remain markedly subjective with little guidance on grading, particularly around the middle elements (2, marginal and 3, acceptable). Furthermore, the design of this document specifically for surgeons within the operating department means there is limited adaptability to the wider clinical setting or other professional groups. Similarly, Flin and Maran (2015) discuss crisis resource management in anaesthesia. Although not as developed as the NOTSS, associated factors including anticipation and planning, use of cognitive aids and use of all available information are applied to form a plan are specific to the crisis. This approach reinforces the contextual argument for tools to

measure NTC and demonstrates the challenge of generating a universal process.

Within the civilian sector nursing staff are supported through job descriptions based on the well-established NHS KSF (DH, 2004). The lack of any comparable tool for the construction of job descriptions and assurance of military nurse NTC creates multiple challenges for the development and support of personnel. The absence of any guidance on the NTC role requirements meant that much of the training within units focused overwhelmingly on technical aspects of care and is inconsistent between units. Although working within the NHS, with the expectations to meet NHS standards, there remains little direction on how military nurses are supported in use of NTC during NHS clinical delivery. The subjective nature of the military annual appraisal process and lack of supporting guidance for the professional healthcare adds further difficulties. Both subjects and reporting officers within the focus groups highlighted the challenges in reporting against vague standards resulting in the possibility of inconsistent reports, based on the opinion of who is in post to write them.

All groups reported limited opportunity to stretch their NTC or indeed their technical skill, within the NHS setting. They discussed opportunities given frequently to NHS personnel over them based on being in personnel lines contracted to the lowest registered nurse grade. Any opportunities beyond this were not consistent between units or driven by personalities within the

units. The effect was military nurses felt they were not gaining the experience to prepare them for the operational setting or gain career satisfaction through professional development. This was compounded further by limited military training opportunities associated with a current low operational pace. Despite the inherent links between experience, competence and performance discussed throughout this study, the issues with diminished opportunity for development has become an increasing challenge for military clinical personnel across all professions. This results in diminishing the high standards of deployed care during times of low operational pace due to limited exposure to skills required for the operational setting.

Although this trend can be seen after any period of high intensity warfare, it has recently become known as the 'Walker Dip' (Walker, 2018) and has a direct impact on preparation for care delivery for future operations. This is supported by Cant et al (2022) who found consultants believed their surgical competence for challenges likely to be seen on operations, particularly penetrating trauma, was diminished by the lack of exposure in the NHS. It matches the phenomena described by nurses in this study. Not only does this fuel the feeling of being underutilised and devalued within the civilian setting, but it also risks not adequately preparing personnel for the rigors and roles of the operational setting.

The development of assurance processes to support military nurse NTC is a difficult problem for which a universal solution is equally challenging to identify. The complexity for military nurses is imbedded in serving two masters with a lack of supporting guidance written in a language that both can understand. Mathaba et al (2019) asserted that competence in healthcare should be developed and identified through a collaborative process between all stakeholders. Failure to provide appropriate opportunities for the development of specific competence has a negative impact on levels and ultimately clinical delivery. In the case of British military nurses this is likely to be in both the civilian and deployed contexts. The outcomes of both the substantive and formal theories support the need for a process involving all stakeholders. In the case of the military nurse NTC, this needs to factor in the identified construct and adequately prepare for nurses to use it in either context. Not only will this serve to drive forward clinical care in preparation for operational deployment but organisationally, it is likely to result in retention of experienced staff (Chen et al, 2011).

6.2.3 Substantive Theory: Conclusion

Across all focus groups, the drive for military nurses to be competent for their working environment was extremely strong. The groups consistently raised a collection of NTC competencies they thought were essential for British military nurses, to the point that saturation was not only reached early but validation of these views was reinforced in later groups. These

skills formed a construct which was informed by the conditions in which they were working, whether UK non-deployed or in the operational setting, and how assurance and governance processes could be conducted. Indeed, these conditions, particularly through the operational role, were a contributory aspect to the British military identity which they held dearly. However, one factor emerged stronger than all the others: context.

The context in which the NTC construct identified in this study was being used, underpinned the other three elements. This resulted in the same competencies frequently reported as being applied in slightly different ways depending on the situation. Consequently, the data in this study shows that British military nurses view NTC as a complicated concept consisting of competencies and characteristics, driven by their contextual application. To date though, there has been scarce academic investigation into what is required for British military nurse NTC. What little has been produced is either insufficient to draw together a realistic working model or so unwieldy that practical application is impossible. Firmly grounded in the data, the substantive theoretical model in this study provides an approach to NTC development which fills this void. Whilst Finnegan et al (2015) looked at the operational setting in a limited study, there is no consideration of the non-deployed environment in which British military nurses carry out most of their clinical roles. The contextual core, identified in this substantive theory, provides the backdrop for the constituent competencies to come together in a coherent framework which can be utilised in the non-deployed setting to

prepare for the rigors of deployed operations. Bringing these two elements together based on the views of those entrenched in their everyday work, is a new approach in which the skills and competencies can be refined and used in both settings.

The current reality for British military nurses working in the civilian setting and the limitations they feel are imposed upon them, consistently came back as a significant source of frustration. The existing processes for assurance of competence through the DONC document were reported by the focus groups as offering nothing to support the development of NTC. This has been compounded further by current contractual arrangements and the perceptions of British military nurses that they are seen by their civilian counterparts as little more than a staffing bank, with no acknowledgement of their often-diverse NHS and operational experience. To date, there has been no academic evidence available exploring these views or the impact on how this affects the conduct or construct of British military nurse NTC. For the first time, this study has academically explored the views of British military nurses, exposed the angst broadly felt at not being able to develop or being underutilised in their clinical settings, and developed a theoretical basis on which a construct for NTC development can be based.

6.3 Formal Theory: Competence Overview – The Four C's

Glaser (2010) asserts that formal theory rarely gets the attention it deserves. In many cases the substantive theory suffices to explain the phenomena within a specific area. He cites the reason for this as being the development of formal GT does not typically fit the qualitative analysis approach. Glaser and Strauss (1967) argued strongly that substantive theory is an important aspect of the theoretical development, but the journey does not necessarily stop there. Substantive theory can act as a springboard to the development of broadly applicable theory that is not restricted to any specific setting. In doing so it aids in the development of wider properties, categories, and modes of integration to other realms of practice. Glaser (2010 p.99) defines formal theory as *'a theory of a SGT core category's general implications, using, as widely as possible, other data and studies in the same substantive area and in other substantive areas.'*. This approach enables the core aspects of the substantive theory to be generalised to use in other areas outside of and not related to the original investigation (Corbin and Strauss, 2015).

Although the data from this study are specific to British military nurses in the operational and non-deployed settings, the core concepts of context, conditions, construct, and conduct have far wider applicability. Indeed, formal theories, grounded in the substantive, are less specific to groups or environments and this model has clear application outside of the British

military nursing environment. Understanding of competence as a general term throughout this study was heavily influenced by the professional aspects of nursing but there were multiple aspects raised which have a broader applicability. The theoretical outcome was driven by the context in which it was being used, but as context could changes the general rules of competence would still stand. The groups discussed knowledge and experience as the underpinning of developing expertise and credibility. Citing Benner's 2001 seminal work on novice to expert, the group felt that growth in competence is generally commensurate with experience. This experience in turn, influenced the contextual application of that skill enabling the practitioner to move towards expertise, but only in that setting. By changing the frame of the contextual requirements, this formal theory advocates transferability of the framework to other non-nursing areas.

This study demonstrates that competence is viewed by British military nurses as both and driven by the situation in which the nurses find themselves. For one to be considered competent in general terms, they must have the underlying traits, behaviours and skills which enable them to become competent in more specific terms. These characteristics essentially create the conditions by which one learns to apply a range of skills and behaviours in becoming contextually competent. The respondents articulated that credibility in developing military nurse NTC was rooted in having these core characteristics which then helped to grow the necessary expertise.

From the substantive model generated, a formal theoretical model of competence emerges which can be broadly applied beyond the British military nursing sphere. As seen diagrammatically in figure 10, rather than giving a specific singular definition for competence, this model considers the three key aspects of conditions, construct and conduct as synergistic domains driven by contextual core, which inform users of the competence requirements of their areas of practice. Whilst the substantive model gives clear application of examples specific to British military nursing, each of the aspects can be utilised, driven by a different context to suit the needs of the user. In this respect, the emerging formal theory in this study brings together each component in a coherent practical way not considered by key authors such as Weinert (1999), Schneider (2019), or Vitello (2021).

As a formal theoretical model for NTS this can be applied to a range of situations from the most straight forward tasks to complicated, multi-faceted roles which require balancing of a plethora of domains, knowledge, and experience. Consideration of competence in these terms enables a constructive theoretical approach to teaching, assurance and governance which is grounded firmly in the data and reflects the situation specific requirements of the individual.

Figure 10. Formal Theory of Competence

CONSTRUCT

CONDITIONS

Technical competencies

Characteristics

Non-technical competencies

Who

When

Where

Opportunity

Trust

Metrics

CONTEXT

CONDUCT
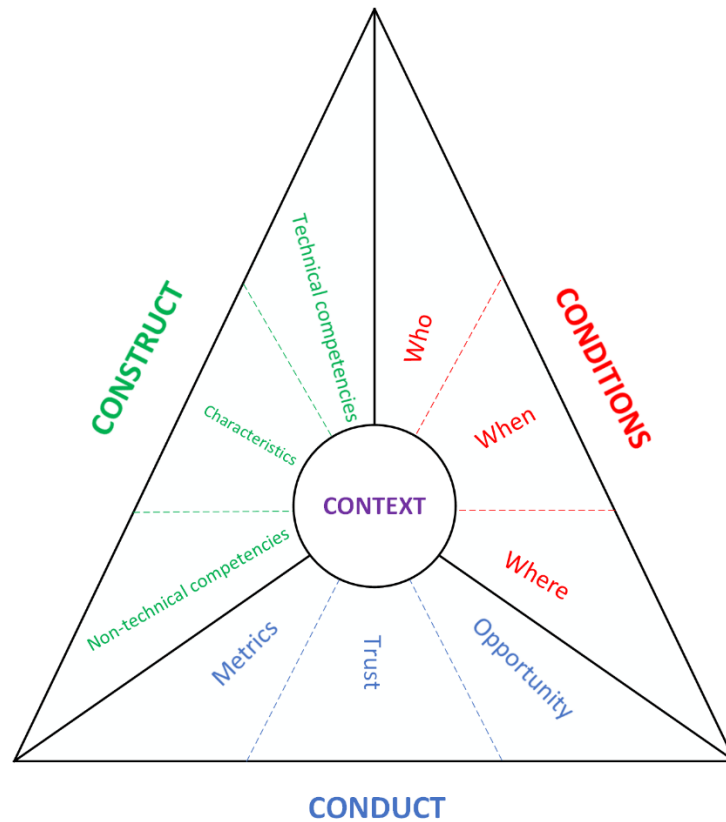
In contrast to the model visualised in the substantive theory, this model views each aspect in more general terms. For example, in place of NHS or Operations within conditions, the application of who, when, or where allows users outside of the British military nursing environment to apply their own conditions. Whilst the core construct remains in place, the detail then becomes transferable to a new setting. In this way, this study considers them as the four Cs of competence. This section will explore this formal model based on the four C approach.

6.3.1 Formal Theory: Context

The overarching theme or core category to emerge across both the focus groups and the literature was overwhelmingly context in which competence is being used. Blomeke et al (2015) argued the need for a point of reference which sits in the real world and informs performance requirement statements within competence, regardless of approach being taken. Even in the broadest application of the term, there is understanding that competence is frequently applied within a specified situation (Eraut, 1998).

Reflecting much of the literature, the focus groups identified that competence was dependent upon the situation in which it was being used. However, this contextual application was complex. Participants cited that even the use of a single practical skill may require a selection of associated non-technical competences depending on the patient, the environment, or the purpose of its application (such as routine or emergency). Whilst the practitioner may be competent in carrying out such a skill within one situation, they may not be able to equally apply it in another. The blending of practical process with general characteristics goes someway to supporting Mansfield's (2004) narrow view of competence. However, inclusion of behavioural aspects needed to solve evolving problems and adaptability to the situation, shifts the view more towards his broad view of competence. Indeed, the requirement for British military nurses to apply an array of traits, behaviours and skills reflects the challenge one has in

understanding competence in general and group specific terms. Rather than being static in nature, data from this study demonstrates competence to be a dynamic concept based on how, when, where, and by whom it is being applied. The resulting necessity for British military nurses to adapt and change their 'normal' state when deployed and return to the NHS which is no longer normal, creates considerable clinical behavioural challenges for British military nurses.

Application of contextual considerations means that it is impossible to view competence in isolated terms. It is more than simply doing something correctly; it is a concept which becomes more complex with requirement to master skills appropriate to the task at hand and situation in which it is required. This is reflected throughout the substantive aspect of this theory with British military nurses utilising their NTC relevant to either their NHS or their operational setting. The level of contextual competence applied is directly correlational to the level of experience held by the individual in each. The focus groups all agreed that experience acted as something of a 'golden thread' running through the development towards being deemed competent or expert. Furthermore, competence was broadly viewed by the groups as an integrated set of capabilities consisting of context related clusters of knowledge, attitudes, and skills, applied in specific conditions in specific ways. In this way it can be applied in contextual terms to areas away from British military nurses and echoing Weinert's (1999) assertion of learning and application of knowledge being based on contextual

understanding and experience of the setting. However, this formal theory goes further by including a structured approach and articulating the need for an identified implementation process. When considered from a broader perspective, application of this formal theory allows users to apply their own conditions and contexts to the setting of competence in creating a practical approach to competence.

6.3.2 Formal Theory: Construct

Drawing from the findings of this study and existing information as a further data source, a conceptual construct for competence in general terms emerges. Data from both the participants and existing literature strongly point to a model based on skills as constituent parts of competencies. In turn, each domain is constructed of the relevant competencies which are applied to the situation at hand. This process is driven by knowledge and experience, meaning that as one becomes more experienced within a domain, they can develop a broader competency base. This enables users to progress to a high level of overall contextual competence. As demonstrated in the substantive construct, although domains are articulated separately, they are not necessarily mutually exclusive, with aspects from one likely to affect others. This model also reflects a process of growth and that to be considered contextually competent, practitioners are required to access and reconcile each domain with the others. Whilst there is the specific remit of this study for British military nursing, as a

formal theory, the construct seen in figure 12 can be applied to an array of settings with the domain requirements set by the organisation in which it is being used. This approach can be equally utilised for technical and non-technical competence but gives scope to consider both as one moves towards contextual competence.

Figure 11. Conceptual Competence Construct.
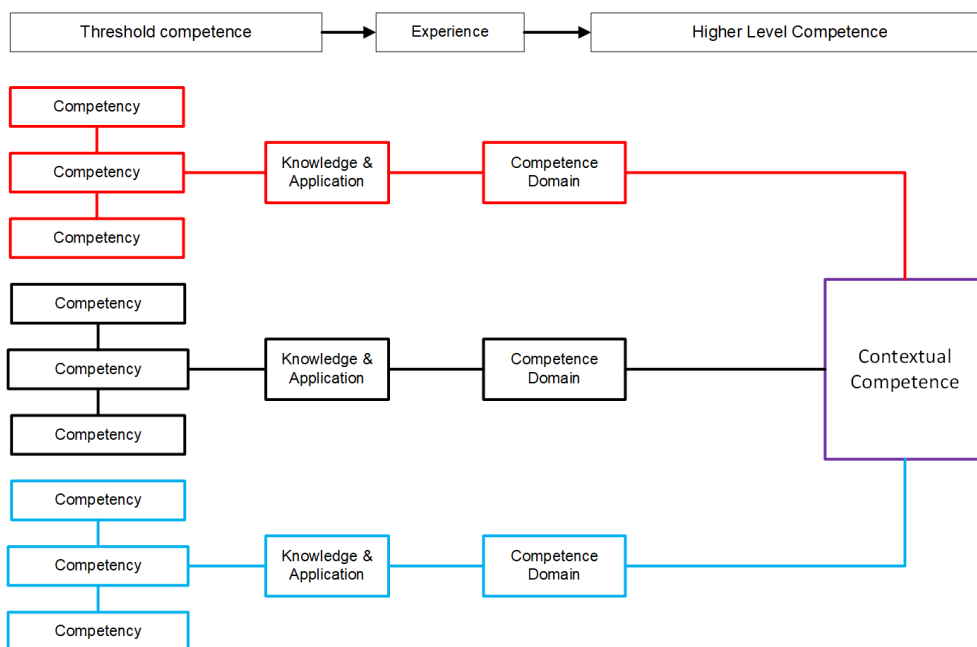
Within the substantive construct for British military nurses, the competence domains for NTC are set as EI, communication, and leadership, each supported by a series of contextually driven competencies. Within the remit of the formal construct in figure 11, the structure mirrors the substantive, but these domains are left unspecified. This allows users with the

contextual knowledge of the setting to add competence domains and constituent competencies as required. Use of this framework creates the practical element of the wider theory and gives structure to how competence requirements can be articulated.

6.3.3 Formal Theory: Conduct

When considering conduct of competence in general and the context in which it is being applied, there are often significant assurance and governance implications for both employers and educators. Mulder (2011) asserts that competence statements which reflect expectations of what is required of the individual, must be situation specific. Consequently, the contextual application of competence is important in determining how personnel are viewed and assessed. All focus groups identified the need for competence to be assessed and lamented the use of the current systems. However, they did not give any detailed direction on how this may be achieved.

As discussed in section 3.2.4, the measurement of competence can be fraught with challenges, especially when considering the subjective nature of an area such as NTC. The focus groups considered measurement a key element of any structure for British military nurses to assure personnel deploying. This approach supports the wider literature which argues for an organised and objective way to measure competence. The focus groups

considered practical skills and associated competencies in binary terms –
pass or fail – whereas subjective skills were harder to discern outcomes for.
Once again, the contextual considerations come to the fore. Within a
broadly applicable formal theory, the measurement outcomes must be set
and relevant for the setting they are being used in.

A further aspect identified by the focus groups was the need to ensure
appropriate opportunities for personnel to develop competence. They
lamented the lack of exposure to relevant roles afforded to them in the
civilian setting, resulting in frustration as well as the risk of not being
competent for operations. It has been well established in both the findings
of this study and the literature that development of contextual competence
is closely related to experienced. In a small-scale study, Sakurai et al
(2022) demonstrated physiotherapists were considerably more competent
in their roles after three years when compared to one. However, experience
needs to be relevant to what is expected in the competence assessments.
Teren-Yepez et al (2022) explored problem solving competence within the
business community constructed of two aspects: creativity and speed.
Creativity refers to identification of solutions to problems but requires speed
to have a measurable effect on business outcomes. They argued use of
serendipitous experiences rather than active targeted experience slows the
identification of problems and the implementation of solutions. From this
approach it can be inferred that providing targeted experience enhances
the competence of personnel. Intriguingly, the same study also found those

with less experience in a system were sometimes more creative and cost effective in the solutions identified as they were not confined by their knowledge and experiences of the system.

6.3.4 Formal Theory: Conclusion

In line with Glaser and Strauss's (1967) original views, the identification of a formal theory is not always apparent and subsequently does not get the attention it deserves. However, in the case of this study, it became apparent, through synthesis of the data, that the substantive model could be applied, with contextual adjustments, to other areas. The formal theory to have emerged here views competence in far more general terms than the substantive but, by bringing together aspects founded on the focus group data creates a more coherent approach than any developed to date.

Conceptual explorations of competence such as those provided by Weinert (1999), Schneider (2019), or Vitello (2021) identify the contextual nature of the competence but do little to identify how competence is constructed or conducted. Conversely, frameworks such as the NHS KSF give components of competence but their use across a broad range of professional groups dilutes contextual direction or support in the development of staff from specific groups. This model mitigates that by uniquely bringing together aspects discussed across the literature, with data drawn from groups in a substantive area to give a transferable

structure. This model considers the four Cs as equally vital for success. In doing so, it creates a new approach to competence which builds on the work of previous researchers, to cohere all aspects into a single model. Although based on the substantive theory grounded in the data from British military nurses, the core formal theoretical framework can be applied to wider settings through adjustment of the competence domains for the context in which it is being applied.

6.4 Limitations

The requirement to report limitations is well established as part of the research process (Ross and Biblar Zaidi, 2019). These authors went onto note recording of limitations in process or interpretation enables readers to understand potential bias and any issues which may affect the generalisability of the outcomes. Drotar (2008) adds there is also an ethical responsibility of researchers to maintain scientific integrity by reporting limitations. Lingard (2015) though, articulates that limitations are often not well used and often come in the form of a confession, a dismissal, or a reflection. Confessional approaches seek to acknowledge limitations before others do whereas dismissive approaches seek to reduce the focus on such issues. Consequently, Lingard (2015) advocates a reflective approach which allows the relevance of limitations to be both acknowledged and considered when understanding the contribution

research makes to a body of knowledge. This study has the following limitations:

Single Researcher

Although there was comprehensive academic supervision throughout, this investigation was carried out by a sole researcher on a doctoral program. This led to individual analysis and interpretation of participant responses, risking researcher bias. This risk is further enhanced by conducting of focus groups without an assistant or second moderator (Gerger-Swartling, 2007). Singh and Estefan (2018) argued this is an expected element to Straussian GT but one which can be minimised. To aid mitigation within this study, a structured reflexive approach has been applied throughout supported by regular discussion with supervisors and academic peers. This has enabled the researcher to articulate wider affecting factors as well has their own position and influences.

Sample Size

Aguboshim (2021) articulates that the required sample size for qualitative research is often difficult to determine and should be driven by data saturation. Indeed, Vasileiou et al (2018) argued that focus group sample sizes in GT are directed not by arbitrary figures, but the levels of theoretical saturation. This is reflected across the GT spectrum where the data collection process and subsequent theory emergence is rooted firmly in

reaching the point where no new information is revealed by participants (Aldiabat & le Navenec, 2018). The availability of personnel due to operational, clinical, and training commitments in conjunction with the time constraints, detailed below, contribute to the challenges of generating a suitable composition within focus groups. Whilst there has been demonstration of saturation in most aspects themes raised within this investigation, increasing the number of focus groups *may* have resulted in identification of wider aspects not considered by the sample in this study.

Time Limitations

In line with this study being part of a Defence funded academic program, time has been limited by completion date requirements. This has been further constrained by time taken for the organisational processes set in policy, such as ASAC and MODREC, required for clearance to carry out research using a military population. The use of an iterative process to analysis associated with GT, the scheduling of focus groups, and affording of time to complete within the working day, have contributed to completion within the set deadlines.

Organisational Influence and Conflicts of Interest

Although this study has been undertaken as part of a funded academic

program, there has been no direct influence. Consequently, there are no

conflicts of interest to report.

CHAPTER 7 – Conclusion and Recommendations

The issue of understanding competence has a long history of vociferous debate amongst scientists and scholars alike. In keeping with this trend, in depth discussion across all focus groups generated a considerable amount of data from which new theory has emerged. Substantively, a model specific to British military nurse NTC has added to the limited existing work by bringing together the 'four Cs' of context, conditions, construct and conduct to form a uniquely coherent model. Although developed for British military nurses the further surfacing of a formal theory, firmly grounded in the data, shows the contextual utility to other professional areas, as well as the methodological adaptability of GT. In considering the new theoretical approach identified in this study, these concluding notes will articulate recommendations for the onward application in development of the British military nursing role, both in UK non-deployed and the operational settings.

Since White's 1959 early discussion of competence, multiple authors have developed views which attempt to explain how humans successfully learn and navigate through their lives. More recently this has been applied to the educational and occupational settings with various models defining associated characteristics. Competence has become part of our common lexicon and is frequently seen in binary terms when applied to completion of specified tasks. Perhaps though, it is the view of incompetence and the issues of failure to complete tasks safely, or efficiently, which are more emotive. Whilst this task orientated view can be applied to aspects of technical skills, the understanding of what it is to be competent becomes

opaque when applied to more complicated roles and subjective systems. This is demonstrably the case when applied to British military nursing NTC, for which the dearth of exiting research justifies this study and the methodology used.

The emerging substantive and formal theories, grounded in the focus group findings and the literature as a data source, are founded on the themes of context, conditions, construct, and conduct. Whilst these four C's of competence are broadly reflected across the literature, this study uniquely coheres them into a singular theoretical model which can be applied substantively to British military nursing and more formally to other fields. In doing so, this research adds to understanding of competence as a concept and gives deeper insight into the complicated role British military nurses play on operations and in civilian settings. Relating to who requires competence and how, when, and where they are using it, context quickly emerged as the core theme influencing everything from how competence requirements are identified and structured, to the means through which they can be measured and assured. Despite context providing the overall direction for competence, developing a useable construct to define specific competence requirements is necessary to give users clear understanding of their roles. The findings of this study demonstrate a hierarchal structure where competence domains are made up of competencies. These in turn are constructed from individual skills. It is vital this construct is supported by conduct which enables achievable teaching support and the conditions to

gain experience to practice, develop, and refine associated competencies. These require a realistic method of assurance which is as objective as possible. Together these four C's synergistically create an organised approach to managing competence in a way that can benefit both the individual and organisation.

Recommendation 1: *Adoption of the model of contextual competence identified within the study to reflect the conditions in which it being used, the construct required to reflect the role being played, and the conduct to ensure assurance of the military nursing workforce.*

In exploring British military nurse NTC, this study has identified communication, leadership, and emotional intelligence as a triumvirate of competence domains British military nurses feel are vital to their roles. Across the groups there was widespread acceptance of the need to be clinically technically competent. Whilst it was not within the remit of this study and expertise of the researcher to explore, there was wide agreement from the groups that this was a necessary aspect for their credibility. In addition to the three NTC domains and technical competence as a further domain, the groups identified a series of characteristics. In contrast to competencies, these were demonstrable traits they believed contributed to learning and applying British military nurse competence. As such they were added to the construct which is supported by knowledge, application, and experience.

The findings clearly demonstrate a structure for each domain comprised of competencies although the focus groups did not identify many of the specific associated skills.

Recommendation 2: A British military nurse framework is required for UK military nurses and the organisations in which they work, to fully understand both technical and non-technical requirements of their deployed operational and UK roles. This would include significant refinement of current processes and must be founded upon the model emerging from this study. Therefore, it needs to be constructed around:

> a.   *Communication.*
>
> b.   *Leadership.*
>
> c.   *Emotional intelligence.*
>
> d.   *General characteristics.*
>
> e.   *Technical skills.*

The investigation of each of these should form the basis of future post-doctoral work which could result in the development of a knowledge and skills framework to guide the assurance of the applied construct across the spectrum of both experience and rank.

Based on the findings of this study and the available literature, the development of a British military nurse KSF is strongly advocated by the

data. Founded on the outlined construct, this would help to give a clear structure on both the operational and UK based competence requirements. Using language familiar to the NHS but written for military requirement, this would help to support development of job descriptions suitable for both settings with all stakeholders involved. Furthermore, it could aid in matching military clinical personnel to NHS bandings based on their established skills and experience. In turn, this would facilitate further opportunities for NTC development, best use of military personnel within the NHS setting whilst sating the military nurse appetite to reconcile their operational and UK roles, adding to their professional satisfaction.

Recommendation 3: The resulting competence construct must be supported by a British military nurse KSF which clearly identifies the NTC requirements. This needs to be articulated and applied in a fashion associated with professional development, experience, and where appropriate, rank.

The extensive discussion across all four focus groups combined with the lack of existing literature demonstrates the difficulties with understanding the British military nursing role and the associated NTC. British military nurses are contextually challenged by having to gain nursing experience for operations within the civilian environment. This dichotomy is exacerbated by what they perceive as poor role understanding from their civilian counterparts, experiences, and what they can add to the NHS setting. They

report that any opportunities for development are inconsistent and the result of personalities, rather than any organisational process. Consequently, they feel like a junior partner in the hospital setting, where their clinical exposure is limited to lower grade roles in which they are unable to stretch or develop their NTC. This results in low levels of job satisfaction, risks decreased retention of experienced staff, and impacts on the operational capabilities of both the nursing team and the wider hospital capability.

A common view across all focus group data was better use of NHS settings to provide experiences relevant to both development and maintenance of NTC in preparation for operations. The vague military job descriptions for both deployment and in the NHS, added to this through lack of detail identifying any required competence.

Recommendation 4: *The refinement of job descriptions to accurately reflect all requirements of UK and Operational roles.*

Recommendation 5: *The language applied to the development of job descriptions must reflect the military environment but be recognisable and familiar to NHS colleagues. This will ensure there is no loss of meaning between organisations with both understanding the requirements of military nursing personnel working in their respective environments.*

Whilst being broadly supportive of the NHS banding system, they lamented the lack of opportunities to access more senior roles as part of their development. Not only were they deeply frustrated with this limited use of their own experience and skills, but also how this affected their preparation for operations, where they were likely to be placed in positions utilising a higher level of NTC.

Recommendation 6: Rather than being assigned into NHS band, military nurses must have their knowledge and experience evaluated and mapped to NHS banding to ensure they are able to access appropriate roles and opportunities. This will serve to ensure continued practice of both technical and non-technical competence, avoiding skill fade, ensuring a process of development through exposure to NTC skills associated with higher level responsibilities. This will aid in both in preparation for operational deployment and ensure competence continuity when posted between secondary care settings.

The development of the British military nurse KSF would aid in mapping personnel to an appropriate level within the clinical setting whilst providing an objective handrail for appraisal and professional development.

Military nurses value the patient care they deliver in the NHS, but their operational contribution is a central aspect to their nursing identity. The unique demands placed on them challenge them to continue to develop to

be operationally ready for any theatre in the world. The findings of this study give a framing for the NTC requirements British military nurses feel are required for their roles, which is driven by context. In doing so, it provides an approach to British military nurse NTC which adds a new and significant understanding of their practice. However, further work is necessary to refine specific elements of each competence, construct a useable framework and identify a means of assurance to support transition from theory into practice.

Recommendation 7: *Further research is required to establish a means of consistent measurement and assurance for military nurse NTC based on the model established in this study.*

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APPENDICES

APPENDIX I – Participant Cover Letter and Information

Adam Hughes MSc QARANC
Nurse Lecturer
Academic Department of Military Nursing
Research & Clinical Innovation
ICT Centre
Birmingham Research Park
Vincent Drive
Edgbaston
BIRMINGHAM
B15 2SQ
Tel: 0121 415 8878
Email: adam.hughes876@mod.gov.uk

Reference: 2151/MODREC/22
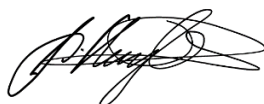
10 Nov 22

Dear Colleague,

Invitation to participate in a study entitled: Assuring military nurse non-technical competence for their UK and deployed operational roles.

As part of my studies for a professional doctorate in health sciences, I am undertaking an investigation to identify non-technical competence for military nurses and a means by which they can be assured for UK and deployed operational roles. You have been invited to take part because you are either in a specialist advisory role or currently posted to a secondary health care unit.

The information at enclosure 1 will explain the aims of the study and what it will involve.

If you decide to take part in the study, please complete the consent form via this link https://rcdm.redcap.bham.ac.uk/surveys/?s=KDP77J3XPDMFFK8N. Consent forms will be confidential and kept in line with MoD data protection process with corresponding emails being deleted.

If you have any question or comments about the study, please feel free to contact the undersigned.

AG Hughes
Nurse Lecturer

Enclosures:

1.   Participant Information.

Participant Information Sheet

Study Title:

Assuring military nurse non-technical competence for their UK and deployed operational roles.

MODREC Application No: 2151/MODREC/22

Invitation to take part

You are invited to participate in this research project. You should only take part if you want to. If you choose not to take part, you will not be disadvantaged in any way.

What is the purpose of the research?

Literature shows that the military nursing role is complex. Expectations of personnel working in the NHS and on deployment vary wildly depending on the nature of the operation, location or Trust in which nurses are placed. Currently there is an overwhelming focus on the practical ability and skills with little consideration for non-technical competence. Consequently, current assurance and development practices do not cater for these wider skills which have been shown to have direct positive impacts on patient care.

Using a grounded theory approach, this project will identify the non-technical competencies required by military nurses for their UK and operational roles. These will then be built into a knowledge and skills framework which can be utilised as part of an assurance process

Who is doing this research?

Adam Hughes, Nurse Lecturer, Academic Department of Military Nursing, Research and Clinical Innovation Centre, Royal Centre for Defence Medicine, ICT Centre, Birmingham Research Park, Vincent Drive BIRMINGHAM B15 2SQ adam.hughes876@mod.gov.uk

Why have I been invited to take part?

You have been invited to take part due to your experience and position as a specialist advisor or your current posting within military secondary care.

Do I have to take part?

No, participation is entirely voluntary, and you should only take part if you want to.

What will I be asked to do?

You will be invited to attend an initial focus group interview to discuss your views on military nursing competence and some of the non-technical elements. The focus group will be made up of clinical colleagues specific to the domain in which you work. Where appropriate, these interviews will be scheduled with existing meetings and with the investigator in attendance. Use of platforms such as MS Teams will also be available if face to face interviews are not possible. This includes individual follow-up questions, if required. Open questions will follow a semi-structured schedule to encourage discussion of your experiences and views of non-technical competence in the firm base and on operations. Interviews will last approximately sixty minutes although no upper limit has been set so you can discuss your views. The interviews will be audio recorded to enable the discussion to be transcribed verbatim.

On completion of the transcription, you may be contacted within 2 weeks for an individual follow-up interview to deepen understanding of the views you have expressed during the initial focus group. This will be via your MOD email account. If you wish to take part in the study, you should complete the enclosed/attached consent form and return it to adam.hughes876@mod.gov.uk

Are there any direct benefits to me of taking part?

Whilst there are no immediate benefits for your participation, it is hoped this study will produce valuable evidence to develop the military nursing role and improve the assurance of personnel's preparedness for deployment, resulting in a higher degree of patient safety.

What are the possible disadvantages (or risks) of taking part?

It is not anticipated that any disadvantages or risks will present as a result of taking part in this study.

Can I withdraw from the research and what will happen if I withdraw?

You can withdraw from the study at any time without giving any explanation and without any consequence. You may also withdraw any given information at any time up until the point it is anonymised which will be complete by 2 weeks after the initial or any required follow-up interview.

Will I receive any expenses or payments?

You will not be expected to require any expenses as the interview will be completed in work time.

Will my taking part or not taking part affect my career?

Your choice to take part or not in this study. All contributions of the focus groups are anonymous and will not affect your Service career in any way.

Who do I contact if I have any questions?

Name: Adam Hughes

Address: Academic Department of Military Nursing, Research and Clinical Innovation Centre, Royal Centre for Defence Medicine, ICT Centre, Birmingham Research Park, Vincent Drive BIRMINGHAM B15 2SQ

Tel No: 0121 415 8893

E-mail: adam.hughes876@mod.gov.uk

Who do I contact if I have a complaint?

Name: Dr Philip Woodgate

Address: Research and Clinical Innovation Centre, Royal Centre for Defence Medicine, ICT Centre, Birmingham Research Park, Vincent Drive BIRMINGHAM B15 2SQ

Tel No: 0121 415 8861

E-mail: Philip.Woodgate100@mod.gov.uk

What happens if I suffer any harm?

It is very unlikely you will suffer any harm as a direct result of taking part in this study. However, if you are harmed, you can apply for compensation under the MOD's No-Fault Compensation Scheme.

Will my records be kept confidential?

All responses will be anonymised, and information kept in line with current MoD policy, UK GDPR and the Data Protection Act 2018. To anonymise the data, participants will be given a number and no identifying data will be used through the collection and analysis stages. Only the primary investigator will have the key to identifying any participants once the data has been anonymised. Although a list of ranks will be taken to reflect the experience of the group, no demographic data will be taken from participants to identify them. All of this information will be destroyed after completion of analysis. No information with the study will be shared with anyone else unless the unlikely event of wrongdoing is exposed. Should this happen, advice will be sought from research supervisors and appropriate action taken.

Who has reviewed the study?

This study has been reviewed and given favourable opinion by the Ministry of Defence Research Ethics Committee (MODREC).

Further Information and Contact Details
Name: Adam Hughes

Address: Academic Department of Military Nursing, Research and Clinical Innovation Centre, Royal Centre for Defence Medicine, ICT Centre, Birmingham Research Park, Vincent Drive BIRMINGHAM B15 2SQ

Tel No: 0121 415 8893

E-mail: adam.hughes876@mod.gov.uk

Compliance with the Declaration of Helsinki
This study will be conducted in accordance with the principles defined in the Declaration of Helsinki [24] as adopted at the 64th WMA General Assembly at Fortaleza, Brazil in October 2013.

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[24] World Medical Association Declaration of Helsinki [revised October 2013]. Recommendations Guiding Medical Doctors in Biomedical Research Involving Human Subjects. 64th WMA General Assembly, Fortaleza (Brazil).

APPENDIX II – Consent Form for Participants in Research Studies

Please complete this consent form electronically using the link:

https://rcdm.redcap.bham.ac.uk/surveys/?s=KDP77J3XPDMFFK8N

Title of Study: **Assuring military nurse non-technical competence for their UK and deployed operational roles.**

MODREC Reference: 2151/MODREC/22

Please Initial or Tick Boxes

- **The nature, aims and risks of the research have been explained to me. I have read and understood the Participant Information Sheet and understand what is expected of me. All my questions have been answered fully to my satisfaction.**

☐

- **I understand that if I decide at any time during the research that I no longer wish to participate in this project, I can notify the researchers involved and be withdrawn from it immediately without having to give a reason. I also understand that I may be withdrawn from the study at any time by the research team. In neither case will this be held against me in subsequent dealings with the Ministry of Defence.**

☐

- **I consent to the processing of my personal information for the purposes of this research study. I understand that such information will be treated as confidential and handled in accordance with the provisions of the Data Protection Act 2018.**

☐

- **This consent is specific to the particular study described in the Participant Information Sheet and shall not be taken to imply my consent to participate in any subsequent study or deviation from that detailed here.**

☐

- **I understand that in the event of my sustaining injury, illness or death as a direct result of participating as a volunteer in this research, I or my dependants may enter a claim with the Ministry of Defence for compensation under the provisions of the no-fault compensation scheme, details of which are attached.**

☐

- **I agree to participate in this study**

☐

Participant's Statement:

I………………………………………………agree that the research project named above has been explained to me to my satisfaction, and I agree to take part in the study.

Signed   Date

Investigator's Statement:

I ADAM HUGHES confirm that I have carefully explained the nature, demands and any foreseeable risks of the proposed research to the Participant.

Signed: **Date:**

Contact Details of Chief Investigator:

Name: Adam Hughes

Address: Academic Department of Military Nursing, Research and Clinical Innovation Centre, Royal Centre for Defence Medicine, ICT Centre, Birmingham Research Park, Vincent Drive BIRMINGHAM B15 2SQ

Tel No: 0121 415 8893

E-mail: adam.hughes876@mod.gov.uk

Contact Details of Volunteer Advocate:

Name: Dr Philip Woodgate

Address: Research and Clinical Innovation Centre, Royal Centre for Defence Medicine, ICT Centre, Birmingham Research Park, Vincent Drive BIRMINGHAM B15 2SQ

Tel No: 0121 415 8861

E-mail: Philip.Woodgate100@mod.gov.uk

APPENDIX III – DMSRSG Approval Letter

Strategic Command
Headquarters Defence Medical Services Group

Brigadier D R Wilson QHP MBChB MD MSc
FRCP
Head Research & Clinical Innovation
HQ Defence Medical Services
ICT Building, Birmingham Research Park
Vincent Drive, Edgbaston, BIRMINGHAM
B15 2SQ
Telephone   BT: +44 (0)121 415 8857
MOD: SB: +44 (0) 3001695371
E-mail: Mob: +44 (0)7825 174479
             Duncan.Wilson651@mod.gov.uk

Maj Adam Hughes

7 October 2021

Dear Adam,

PhD Proposal: Military nurse non-technical competence for their UK and deployed operational roles

Many thanks for your presentation of your PhD proposal at the Defence Medical Services Research Steering Group.

It was noted that your study is already funded by sS and that no funds are required from the DMSRSG, with any minimal T&S costs being absorbed by RCI as your home unit.

With that in mind, your proposal was endorsed, however feedback was that the research question should be more robust, with more development of the proposal required.

Quarterly updates will be expected via your Defence Professor at the Research Defence Academic Working Group (RDAWG).

If you need any further information, please let me know

Yours sincerely

Brigadier D R Wilson QHP
Head Research & Clinical Innovation

Copy to: Sam Brown
Research Business Manger

APPENDIX IV – ASAC Approval Letter

Army Scientific Assessment Committee
Army Headquarters
Blenheim Building
Andover
Hants
SP11 8HT

Telephone: 01264 887541
Military Network: 94393 7541
Email: ArmyPersCap-ASAC-
Mailbox@mod.gov.uk

Dated: 03 May 2022

Dear Maj Hughes,

ASAC number: 467
ASAC decision: Approved
Study title: Assuring Military Nurse Non-Technical Competence For Their UK And Deployed Operational Roles.

I am writing to inform you that the Army Scientific Assessment Committee (ASAC) has completed the review of your MODREC application. I am pleased to inform you that your protocol has now been approved by ASAC and can now be submitted for MODREC review along with the research sponsors checklist.

I wish you all the best with your research.

Yours sincerely

AJ Roberts

Dr Andrew Roberts, Co-Chair ASAC

APPENDIX V – MODREC Approval Letter

Ministry of Defence
Research Ethics Committee

MODREC Secretariat
Defence Science and Technology

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Major Adam Hughes	Our Reference: 2151MODREC/22
Academic Department of Military Nursing	
Department of Research and Clinical Innovation	Date: 15 Jul 2022
HQ DMS	
ICT Building	
Vincent Drive	
Birmingham	
B15 2SQ	

Tel: 0121 414 8852
Email: adam.hughes876@mod.gov.uk

Dear Major Hughes,

Assuring military nurse non-technical competence for their UK and deployed operational roles – V1.3

Thank you for submitting your revised application (2151/MODREC/22) with tracked changes and the covering letter with detailed responses to the MODREC letter. I can confirm that the revised protocol has been given favourable opinion ex-Committee.

This favourable opinion is valid for the duration of the research and is conditional upon adherence to the protocol – please inform the Secretariat if any amendment becomes necessary.

Please note that under the terms of JSP 536 you are required to notify the Secretariat of the commencement date of the research, and submit annual and final/termination reports to the Secretariat on completion of the research.

Yours sincerely,

Julia Cons
Vice Chair, MODREC

APPENDIX VI – Staffordshire University Ethics Approval

FW: 20220915-University_Ethics_Approvals-H025032K - SU_22_039 & Funding

AH Adam Hughes <adam.hughes@student.staffs.ac.uk>

To ● Hughes, Adam Maj (SG-DMed-MedD-NursingLec)

↩ Reply ↩ Reply All → Forward ⊞ •••

Tue 02/01/2024 15:19

OFFICIAL

Dear Adam,

I have raised this application with the Ethics Committee and Chair. Given the status of MODREC approval for this project, the committee will approve this project. We therefore do not now need any additional documentation for Ethical Approval.

Your research proposal has been approved by the Ethics Panel and you may commence the implementation phase of your study.

Kind regards,

Charlie

Ethics Admin
Research, Innovation and Impact Services

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APPENDIX VII – Focus Group Question Schedule

Initial Question Schedule:

What is your favourite cake?

What is your understanding of competence?

What is your understanding of non-technical competence?

What is your experience of using non-technical skills (what, where & when)?

What characteristics do you think make up non-technical competence?

What non-technical competencies do you think are required for the UK and operational roles?

Is there a difference between UK and operational settings for use of non-technical competence? If so, how?

How is non-technical competence learned and developed?

Do you feel adequately prepared for use of non-technical competence on operations? If so, why is that the case?

What recommendations, if any, would you make to develop training in non-technical competence?

Supporting Questions Emerging through the Focus Groups:

Do you think the setting affects perspectives of competence?

Are there any circumstances you need to draw more on your non-technical competencies?

Do you think your workload affects how you use NTC?

Is there a general competence or is it more specific?

Can you be 100% competent?

What is your perspective of Emotional Intelligence?

Can you be competent in Emotional Intelligence?

Do you think experience has an impact on NTC or are the skills innate?

Do you think personnel are prepared adequately in the NHS for operations?

What opportunities do you get to use or stretch your NTC skills?

Do we assume personnel have the NTC ready for operations?

Do you feel you get the same opportunities as NHS staff to develop your NTC within the NHS?

How could we improve opportunities to develop in the NHS?

Is there any such thing as 'organisational competence'?

Are there any ways we could aid in helping learn and use NTC skills?

Do you think the operational pace is having an affect on preceptees?

Do you think clinical personnel are currently SQEP'd for operations or 'NHS SQEP'd'?

What team learning or individual learning might could help develop NTC and what would this look like?

If we had a framework for NTC what would you put into it?

Is that a skill or characteristic?

Are there common NTCs deployed in different ways according to the setting?

What could a non-technical competence failure look like?

Could there be a hybrid approach to NTC between the NHS and the military and what might this look like?

If we could come up with a framework or some description, do you think there would be useful in guiding how we employ and therefore appraise people?

APPENDIX VIII – Example of Recruitment Email

Good morning ****,

As you may be aware, I am now fully entrenched in my doctoral research for which I am investigating the non-technical competencies required of military nurses. The original clearance for this pathway was given by the CNO and I am now at the stage of data collection. In short, I am using small focus groups within a Grounded Theory methodology to explore views and thoughts from within an initial purposive sample. I have attached the MODREC application and clearance information which gives a more in-depth description of what the research hopes to achieve and the methods I am using.

One of the focus groups required as part of the study is from within the Army SNA cohort. As experienced clinicians, I am hopeful that they will be able to give an informed opinion on what non-technical competencies military nurses need in the UK and on operational deployment. The aim is to hold a focus group in the new year lasting approximately an hour with between 6 and 8 participants. Is there any way that you could point me in the right direction to contact this group or to facilitate 'bolting' this onto an existing SNA meeting. This would form part of a series of groups that will give me a broad spectrum of views to build a rich and detailed picture of requirements.

Your assistance in this would be very much appreciated and if there is any further information that you need, please do not hesitate to contact me.

Warmest regards,

Adam

Maj Adam Hughes | Nurse Lecturer I DSA Medicine I
Academic Department of Military Nursing
Ministry of Defence
Headquarters Defence Medical Services (HQ DMS)
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Strategic Command
Headquarters Defence Medical Services

APPENDIX IX – Field Memo Example (typed from handwritten notes)

Field Notes

Competence

Use of competence in specific situations and roles.

Specialist training for nurses to remain operationally ready and competent for role.

Use of defined parameters.

The ability to complete tasks safely, effectively and efficiently.

Vocational standards – educationally driven towards degree standards.

Setting of defined standards.

Complex/nebulous process with multiple elements which change according to role, situation and environment.

Role specific.

Require quantification – skills and abilities, care orientated.

Competence in nursing requires a broad spectrum of roles – making it difficult to quantify.

Understanding that qualification is not necessarily a reflection of competence.

Nursing competence has changed and continues to change.

There is a continual need to apply knowledge to competence.

Development and maintenance of competence needs to be embedded in organisational culture.

Understanding of individual and organisation of competence gaps.

Clinically currently has a very narrow focus – super specialisation adds a tier of difficulty in achieving and maintaining.

Specific NTC Elements

- Communication
  - Appropriate to working with others.
  - Use of appropriate language to audience
  - With CEG
  - With CoC
  - Clinical vs non-clinical
  - Patients
  - Active listening
  - Providing feedback
- Problem solving
- Organisational [ability]
- Leadership
- Management
- Empathy

- Empowerment (mission command??)
- Mentorship
- Team working
- Supporting others
- Prioritisation
- Understanding and avoiding unconscious behaviours
- Decision making
- Pattern recognition
- Organisation understanding and ability to successfully work.
- Adaptability
  - To situation
  - Dynamic and able to transition between military and clinical setting.
- Able to work under pressure.
- Situational awareness
- Conflict resolution
- Emotional intelligence
- Courage [to make and act on decisions]
- Role modelling – see it – be it!
- Learn lessons.

NHS and Military

Clear difference between working in the UK and on Ops.

This is because:

- Personnel are like minded – driven and dynamic.
- Have gone through PDT experiences.
- Come together to form a team.
- Live and work together in challenging circumstances.
- Little opportunity to 'switch off'.
- Better at dealing with adversity.
- Develop, learn and solutionise rapidly.

NHS does not fully prepare for operational deployment.

United by a single purpose – patient care along the entire care pathway.

The NHS is a very different setting, even at times of crisis [Covid].

NHS reported as feeling departmentally siloed without a clear common purpose.

Exposure to senior roles very important in the development of NTC. When done so has complimented military leadership skills but this is dependent upon the quality of supporting NHS training.

Bastion mentality remains strong amongst military nurses.

There is lost development opportunities for mentors.

Exposure and development of NTC

Credibility, authenticity and trust **key** elements of NTC.

Difference between military and clinical credibility.

Trust:

- In CoC
- In setting's ability to cope
- In team
- In military colleagues
- Multi-professional group

A difference between clinical and non-clinical leadership.

Recognition that rank does not necessarily equate to clinical ability.

Dependent on being exposed to situations which will develop such skills.

Courage to have conversations or do something that may not be popular.

Support others to perform at 'top of registration'.

Creation of a learning and development environment to address and prevent future failure. Have courage to appropriately manage failure (avoidance of failure to fail).

Not allowing incompetence to endure which can lead to drop in confidence of both team and leadership.

Higher level of NTC with operational experience. Difference between new/entry op that established op but experience personnel fell back in their experience to improve their readiness and support those around them.

HOSPEX and PDT was felt to offer real value:

- Helped to prepare militarily – working with other military personnel, understanding how the clinical setting worked and how to work with the military teams.
- Less well defined clinically with a split group.

Challenges of gaining NTC in the NHS

Issues raised with NHS supporting development of NTC:

- Very limited opportunities to develop wider NTC skills – described as a 'missing chunk' of nursing role.
- Exposure to wider NTC skills 'luck of the draw' and dependent on NHS staffing situation. Only available to step in if there were shortages in the NHS staffing for that moment.
- Pressure with the NHS limits development time and opportunities.
- Opportunities piecemeal - dependent upon location, support from command team and civilian leaders.
- Reporting of how 'not to' do something or incidents what would not match the deployed capability.

Recommendations

Improve experiences of military nurses through exposure to NTC opportunities.

Development of a clinical/nursing JMQC style course

Review the NVSP to:

- Allow nurses to practice at levels relevant to their experience.
- Match this to bandings in the NHS across all JHG units
- Gain exposure to development opportunities.
- Support opportunities to work at higher levels.
- Review business agreements
- Support NTC development of senior clinicians

Development of a NTC framework that can be supported in the NHS and informed by the operational role.

Creation of a mentorship program for military nurses

Able to run alongside clinical-technical framework.

Support diverse opportunities.

0:0:0.0 --> 0:0:1.950
AH: Start transcribing.

0:0:4.410 --> 0:0:4.670
P06: Yeah.

0:0:4.540 --> 0:0:6.230
AH: Happy days. Oh good
.
0:0:8.130 --> 0:0:16.160
AH: I'm so just as a warmup question because, uh, the larger I say the larger body of the group here is QAs, but we're actually not.

0:0:17.850 --> 0:0:25.200
AH: By waiver, by way of a warmup question, uh relating to QAS uh just like to get people's views on their favourite cakes.

0:0:29.590 --> 0:0:32.990
P09: That's a good question. Has to be a Unicorn cake from Tesco?

0:0:34.50 --> 0:0:36.640
P06: Definitely. You know the cat? No Unicorn.

0:0:38.550 --> 0:0:44.830
P06: Yeah, I'm waiting for you to say Lizard Lavender is the cake.

0:0:39.640 --> 0:0:40.410
AH: Not good.

0:0:45.950 --> 0:0:46.860
P06: Not hearing it.

0:0:46.730 --> 0:0:48.800
P07: Ohh yeah yeah, can remember that.

0:0:49.680 --> 0:0:52.740
P07: Yeah, carrot cake for me, it counts as one of your five a day.

0:0:53.710 --> 0:1:1.0
P010: I'll just it disappointed that the P06 has not baked for us since, uh, she's joined the there's a famous cake involved.

0:1:1.290 --> 0:1:6.940
P08: Especially lemon drizzle.
P06: Early days, early days, you know, takes a bit of time to build up.

0:1:6.790 --> 0:1:8.370
P07: You've not been good enough yet.

0:1:9.230 --> 0:1:10.820
P010: That's very true, right?

0:1:10.320 --> 0:1:13.330
P06: Right. I think only they came out at year five, didn't they?

0:1:16.230 --> 0:2:7.360
AH: Is it we had some interest, we had all the classic cakes and then someone on the last one through in. Yeah. I like a bag of frazzles which obviously you know it takes all sorts, doesn't it? Happy days. OK, So what I'm gonna do is I I've got a question set. Because of the methodology that we're using, there is some there is plenty of scope to go off of that question, certain to go down a few rabbit holes if people are willing to discuss, it's fairly straightforward. We're gonna start with one. I say one simple question. I am so that is to the group. What is your understanding or competence? So how would you define it? What would you define as a key features of it? When would you use it? Those kind of things just to go open to the floor.

0:2:12.210 --> 0:2:21.980
P08: Well, that's why you were here. Look at me. So, it would be to be fully qualified in that which any specific area that we were talking about, but also like the fact that you're using that publication.

0:2:22.290 --> 0:2:22.540
AH: Yeah.

0:2:22.890 --> 0:2:27.280
P08: It can be qualified and then leave it for a year and then of course it goes out the window.

0:2:28.790 --> 0:2:34.20
AH: So without wanting to sort of paraphrase currency and being current in that.

0:2:35.510 --> 0:2:43.300
P08: Yeah, yeah. Comment using the skill regularly confident especially in healthcare safely.

0:2:45.560 --> 0:2:47.520
AH: Confident and safe.

0:2:48.890 --> 0:2:49.250
P09: It's a…

0:2:49.40 --> 0:2:56.650
AH: So, I am I'm just scrolling to notes here, so don't. Please don't think I'm ignoring you. I'm not. I'm just scrolling down some field notes as well.

0:3:0.680 --> 0:3:4.210
AH: Any other thoughts on sort of what our views of competence might be?

0:3:5.790 --> 0:3:8.550
AH: What, what the adverse effects of not being competent?

0:3:10.670 --> 0:3:11.520
P08: Mistakes…

0:3:12.570 --> 0:3:13.660
P06: Inefficiency.

0:3:14.50 --> 0:3:15.260
P07: Safety issues.

0:3:16.40 --> 0:3:17.180
P06: Ineffective.

0:3:19.580 --> 0:3:20.500
AH: Non effective.

342

0:3:22.190 --> 0:3:36.400
AH: Do you think, and this is a bit of one of those rabbit hole rabbit hole questions, do you think your view at AMSTC might affect How you see competence?

0:3:43.400 --> 0:3:47.740
P07: Think it would probably, assessing competence within a fairly pretty limited setting.

0:3:43.520 --> 0:3:45.710
P06: When it comes up, yeah.

0:3:49.690 --> 0:4:5.620
P07: Prescriptive scenarios. So that's maybe a narrow. Competence band rather than, you know wide range if we can't assess all their competencies. I think within the constraints of the exercises.

0:4:1.410 --> 0:4:1.640
AH: Yeah.

0:4:7.650 --> 0:4:10.620
P09: They should come ready to go competent.

0:4:8.50 --> 0:4:8.700
P010: I hope.

0:4:12.460 --> 0:4:24.90
P09: To yeah, they don't tip up to an exam and be… know how to do what was supposed to be doing this all set up here already competent, ready to go.

0:4:25.280 --> 0:4:25.710
AH: Yeah.

0:4:25.700 --> 0:4:27.980
P010: I think we, we oh, sorry, kennel.

0:4:29.30 --> 0:4:35.980
P06: So that being that being validated against measurable, so we've got key performance indicators.

0:4:37.390 --> 0:4:37.720
AH: Yeah.

0:4:39.750 --> 0:4:52.190
P06: For the things that we want to see competence in. Other than the non-technical bit, yeah. They were lot of, it's very task orientated with measurables.

0:4:50.350 --> 0:5:37.640
AH: Yeah. And so that brings us quite neatly into the kind of next question and in terms of we think about competency and kind of big handfuls, that whole overarching, they're competent, they're not competent, but we see it from all different perspectives. You've mentioned already some of the clinical stuff that's very, very, very specific to professional jobs. How do you see what's your kind of view of those non-technical competencies? How would you view that? What would you see as a as a non-technical competence and when, when would you expect something like that to be used?

0:5:40.460 --> 0:5:41.450
P08: Communication.

0:5:43.760 --> 0:5:45.790
P08: And I've said be used daily.

0:5:46.920 --> 0:5:47.360
AH: Yeah.

0:5:47.740 --> 0:5:48.220
P08: Yeah.

0:5:49.20 --> 0:5:50.780
P06: Yeah, interpersonal skills.

0:5:51.520 --> 0:6:10.480
AH: Yeah. So interpersonal skills, I mean I I'm just gonna drive a little bit further into that and those interpersonal skills, what kind of? Umm, how would you break that down? Would that just be they're really good dealing with other people, or is there more specific sort of elements to that?

0:6:11.310 --> 0:6:18.900
P010: EQ would be a top of my list. There is a dearth of it within the military

0:6:12.600 --> 0:6:13.160
P06: I think.

0:6:20.940 --> 0:6:22.840
P010: Within certain corners of the military.

0:6:24.490 --> 0:6:24.850
P06: Yeah.

0:6:24.520 --> 0:6:31.670
AH: Yeah, and. And what kind of factors would you expect to see if someone who's got EQ or to a certain degree, someone who's not?

0:6:32.580 --> 0:7:30.860
P010: Their team qualities. So, I think we see this a lot in small teams and and I think it's very difficult to quantify unless you put it against a measurable sources. The human factors is always quite a good sort of starting point to understand a team's collective EQ because we we are about the collective, not about the individual and I think that's where it becomes quite difficult. But yeah, I think the measurable is definitely the human factors that that play amongst the team and you can tease that out. I think the difficulty for us is we don't have any sort of marker, there's no CTO that says that teams got excellent human faces and that's always quite a good measure of there both the C2 [Command and Control] EQ and the team as a as a whole.

0:7:28.940 --> 0:7:29.240
AH: Umm.

0:7:32.160 --> 0:7:40.830
AH: Do you think that hinders your job? If you've not got those markers? So it does that make it more difficult for you to do and for then potentially to feedback?

0:7:41.500 --> 0:7:59.720
P010: Massively, and I think it, it affects the ability of the organizations to be able to, to, to look back again. How do you challenge is it becomes very easy for an individual or a or a unit to challenge what we're grading them against If there's no marker?

0:7:58.340 --> 0:7:58.660
AH: Hmm.

344

0:8:0.880 --> 0:8:2.620
P010: Or at least some form of marker.

0:8:4.110 --> 0:8:37.650
P06: Think also it's the operational impact, isn't it? So, we might recognize some non-technical issues that will happen. Maybe we can foresee what's going to happen on deployment, but without measurables and without being asked to measure it. It's very difficult to stop that, isn't it? And a lot of that's just personalities. But that's part of the small team make-up, isn't it? And effectiveness?

0:8:38.740 --> 0:8:58.950
AH: So, I kind of stealing my own sandwiches a little bit because we're talking about it here. How would you measure that if it's, I appreciate it's really difficult, I do understand. That's why we're doing the research. But do you think there is a way that we could measure and assure those non-technical skills?

0:9:4.770 --> 0:9:50.570
P010: I think air crew manage it relatively with ease. And I mean, I don't know without sort of looking into too much detail, but there is a grading sheet that they use when they take their captaincy exams about crew resource management and how they're sort of cockpit feels under a certain captaincy and that's how they're evaluated. And so there's quite a lot of research and info out there on how to do it in that particular area. I don't think there is so much in the medical and the setting from reading your sort of research and proposal that there's obviously not much in the medical remit that they're there's bucket loads in aviation.

0:9:52.390 --> 0:10:45.640
P06: The other thing is 360, isn't it? And we certainly were now, as in Birmingham, we used 360 to look at how other people saw each other, and it worked really well. And I mean, we were. None of us were particularly. I'm sure you have to be trained in it nowadays, but certainly all the people who have done the Florence Nightingale Foundation have found it really useful. I'm and I'm always slightly amazed that it only comes in, certainly in the army at OF5, cause it's kind of too late then I would have thought, but I guess that's when they're stepping up into senior leadership so it would be quite a useful tool. Because I think the annual appraisal isn't being, we're not honest enough really. Are we in, in a lot of the annual appraisal Measurable. Something properly.

0:10:46.440 --> 0:10:56.450
AH: Do you think there are appraisal system is flawed in that sense? Is it? Is it difficult to have those honest conversations sometimes?

0:10:58.30 --> 0:11:11.580
P06: That is just very subjective, so it depends on who you are. I mean P07, we've seen that if we report honestly, everyone else's reporting A or B plus or a so then you're…

0:11:2.440 --> 0:11:2.610
AH: Yeah.

0:11:11.280 --> 0:11:21.100
P07: There's no there's no consistency as there's no there's no consistency across well across individuals. That's Wales. There's always that subjective element, isn't it?

0:11:21.860 --> 0:11:27.440
P07: As much as you've got a set of performance indicators, again, it's down to interpretation.

0:11:28.610 --> 0:11:30.900
AH: Hmm…

0:11:30.240 --> 0:12:9.510
P07: Just going back to the validation piece, was just one thing that came up my head. I think

there's always that degree of sort of artificial scenario in the training environment. Some people are, you know, perform very differently between the training environment and the and the real live clinical environment. There are always some people maybe don't fully focus on the on the, on the validation piece, cause I think well, it's only training where is they are totally different and really fully focused and perform really well in the operational real clinical scenario. I think there's always that difference that we need to be aware of.

0:12:11.100 --> 0:12:17.500
AH: So, it's kind of a safe environment, isn't it? With that and some people respond actually better to having a little bit of risk.

0:12:13.480 --> 0:12:36.660
P07: Yeah. Yeah, yeah. And maybe don't. Because, you know, there's almost that. Sometimes there's a blasé approach or especially people who've maybe deployed multiple times. They don't. Maybe they're not. It's fully focused as what they are you know, in every-day live scenarios than they are in the you know the training environment.

0:12:37.860 --> 0:12:44.900
AH: Do you think that experience has a big impact on the on the application of and learning of non-technical skills?

0:12:48.0 --> 0:12:48.560
P07: Umm.

0:12:48.840 --> 0:12:51.910
P06: No validation. Are you talking about?

0:12:52.880 --> 0:13:11.720
AH: I'm just a bit of both, really, just to see what your thoughts are. Do you think those non-technical capabilities get better with experience, or do you find that there's a an innate factor to it that people don't always develop and move on as well?

0:13:13.660 --> 0:13:34.310
P07: So, there's always good, you know, people doing something for the first time, bringing that fresh approach. You know, that's always. That's always welcome. Just cause you've done something. But a number of times doesn't necessarily increase your competence. It could be making the same mistakes over and over, couldn't you? There's a need someone coming in with that, you know, fresh set of eyes.

0:13:36.380 --> 0:13:36.740
AH: OK.

0:13:50.830 --> 0:14:1.550
AH: Uh, it is. Are there any others that that you would list if you were thinking about right, how are we gonna assure this? Are there any other skills that you can think of that you would want to have a look at?

0:14:9.580 --> 0:14:31.220
P06: I think attitudes are quite important. And that ability to sort of decision make whilst having actively listened to everyone, so active listening, I don't know how you know, direct quite difficult. Negotiation skills.

0:14:30.840 --> 0:14:31.30
AH: Yep.

0:14:33.420 --> 0:14:37.350
P07: It's gonna be the majority of these sort of soft skills, isn't it?

0:14:39.910 --> 0:14:45.130
AH: Yeah.
P07: So, the sort of specific measurable clinical Competencies.

0:14:47.390 --> 0:15:4.600
AH: And if this was if it was an easy answer to that question and not just their identifying them. But how are we gonna measure them then, we would already be doing it, wouldn't we? So I and I think this just to give a bit of history, this has stemmed from my experience and where.

0:14:57.690 --> 0:14:57.880
P07: Yeah.

0:15:5.720 --> 0:16:23.780
AH: We've all seen a really good team. You look at that good team and you go, wow, they're they're amazing and they just gel and they click together and they work really well. And my experience, particularly at two Med brigade during the Herrick years, we're very much along those lines. On the flip side of that, we also saw those teams that were uh, shall we say not so good. And we didn't have the means by which to necessarily go. Actually, this wasn't good. This wasn't good because it was all very subjective, depending on who was doing the assessment. But it was universal that people were having [assessment]. People weren't performing to that same level. So that's kind of where this is historically come from. One of the things that did come up and I just like to go into that is certainly in the last Focus Group was do you think that our when our teams come to you for assessment, do you think they're adequately prepared by the NHS do you think they get the opportunity within the NHS within the JHG setup do you think they are appropriately clinically well I'm not looking specifically at clinically skilled but they're appropriately skilled to work within a high demand environment.

0:16:28.560 --> 0:16:43.950
P07: That's just, that's so variable, isn't it? And each in each different in each different case really for each speciality. So that's just so, so varied. The experiences are people who have, throughout the various trusts that they're in.

0:16:32.0 --> 0:16:32.250
AH: Hmm.

0:16:38.280 --> 0:16:38.580
AH: Hmm.

0:16:45.240 --> 0:16:47.350
P07: On throughout the various specialities.

0:16:49.610 --> 0:17:13.540
P07: I think there's certainly enough opportunity there. It's whether or not the individuals then know what they need to be experienced in? If there's a first time deploying, or whether they're proactive enough to to take up these opportunities that are available and say, well, I don't have enough experience in that I need to go and work in that area and gain additional experience or if that's pointed out to the more if they've got that self-awareness.

0:17:15.400 --> 0:18:3.570
P09: But being working in a JHG as a band 5 staff nurse, constantly and moving to all the time. Just when you get settled and you start being trusted by the staff and given extra responsibilities, it's time to move. I you're back again somewhere else trying to learn new trust policies, new practices, and you're back at the bottom again. Being a band 5 staff nurse until the staff get to know you and then you don't again. So, they may have the basic clinical skills to work. OK. And said environments and said it is, but there's sort of leadership and the other qualities are maybe not there because they don't get to build on them.

0:18:5.710 --> 0:18:27.950
AH: Yeah. Umm, it's interesting you say that. Do you think that? Do you think that we need? Is that something we need to work on that we need to give that opportunity and how do you think I I'll go down a slight rabbit hole here. How do you think we could achieve that?

0:18:29.620 --> 0:18:47.50
P06: So Karen McCullough, who's I don't know, I think she might have just left from Portsmouth. Then we tried it to a degree, but she's banded every job and go for interviews, and then they perform at that job. And we should all be doing that. And certainly we we've tried to ban.

0:18:38.970 --> 0:18:39.290
AH: Hmm.

0:18:48.150 --> 0:20:22.90
P06: So in critical care and JHG *** they do the band 6 introduction program and then they should work as band sixes. And I know for MEDX it's really difficult to do that. But otherwise we lose people because really, being a band 5 nurse for 20 years of your career is pretty soul destroying. Anyone who's interested in clinically progressing would. You know, we've seen the ********* of the world will leave because you want to be a nurse in the military and you're not given that progression then they go. But if it's the military piece you like, then I think what's difficult is our expectations are a difficult to manage because the NHS is not there for us, we've got such different agenda. But ultimately what we need people to do is history take and clinical examination and recognize in order to recognize when someone is big sick. But they're not going to see really big sick patients all the time because that's not happening all the time in Britain. And so it's how you manage those expectations? But every time they see a patient, they're gaining experience and you would hope that experience then increases those sort of communication skills as they get more comfortable working with sort of patients and relative etcetera.

0:20:24.410 --> 0:20:32.530
AH: Do you think there's a difference between the application of those skills in the operational and in the NHS setting.

0:20:35.110 --> 0:22:11.0
P010: I think the the kernel touched on it then as well there there's a another sort of questions that which is is always the the operations that we're currently experiencing are not high tempo and most of the non-technical skills, I mean this is just purely anecdotal from my experience most of the non-technical skills go wrong and have a bigger impact on quieter tools and certainly the quieter tools that I've done and they the failure of those non-technical skills has been the the net result of quite a lot of pain for for quite a a large number of people and patients and thinking sort of back to the the heroic practicing on and people days obviously never happened and and sort of discipline issues and across NEWCOMBE and TRENTON that were quiet tools and those the bits that are for me probably the biggest issue. While the thing that absolutely is an issue that that kind of band 5 working and it's perhaps not quite so closely linked to our success or failure and operations? We tend to succeed when it's busy, where by and large and pretty successful with pretty low complication rates. The the clinical environments that we have are really low risk because of the number of clinicians that we have looking after patient comparatively to an NHS environment and.

0:22:11.910 --> 0:23:10.60
P09: But now that we're not doing that anymore. You go on to field hospital. Exercise is getting ready for readiness. People working within the NHS are not. They're not in the high level band 7 meetings, the talk about bad management, patient flow, etcetera, etcetera. And then when they get deployed in a field obstacle exercise and they're heads of departments, they they're not sure what they should be doing sort of that clinical Management side of sitting in the HMC [Hospital Management Cell] with the entire hospital management. They just haven't got it because they don't do it, because even though you could be a nursing officer and the JHG, but you'd be employed at a

band, 5 staff nurse to look after one patient in critical care or running about any ED or award doing the sort of bog-standard basic jobs.

0:23:12.170 --> 0:24:4.170
P06: But the reality is, you know, you look back and tell it can hear it. It is so consultant heavy that you could say when we were in HERRICK, we cut clothes off, we got access was already got we put drugs in. You know we work effectively banned 5 nurses there as well. I think part of the issue is it is so consultant heavy that actually there is huge scope for nurses and radiographers and paramedics. I mean you know, we look at people like *******. She was at band 7, sonographer. She'd be amazing on deployment.

0:23:52.610 --> 0:23:53.90
P07: Yeah.

0:24:5.100 --> 0:25:25.840
P09: But it is such a consultant, heavy environment that we work in. We're not stretched professionally, but we could be at that point of running a shift or especially in ED the people that don't know when, when am I being overrun? When am I gonna be overburdened? When am I passing? When I'm not busy. When do I need to go and speak to the SNO [Senior Nursing Officer] to say I would like some more nurses? When do I call my off shift? And can I manage this myself? They don't get that kind of experience in those skills of noticing I'm gonna be busy or my stores are running down. Who could get me more of this? Who can get me more of that? Who do I need to speak to. It's just that management say and yeah, we work from 5 staff nurses. We deploy because there's consultants everywhere. But it's those shift leaders and those people that are running a shift that don't have the experience to know when actually these casualties are patients are gonna take so much resources. They're going to take up so much time. I need extra staff. I need more people. I need XYZ, and that experience just doesn't come working in a JHG unit.

0:25:2.630 --> 0:25:14.930
P06: But we gained it by deploying right and that that that's the issue that's never changed, has it? Probably coming up to the majority of people now have not deployed or been on an exercise too.

0:25:25.470 --> 0:25:25.700
P07: But a lot of us were in that position as well before *** before sort of [Op] TELIC, HERRICK, weren't we, so?

0:25:31.950 --> 0:25:35.810
P06: Yeah. And. And so ups and downs, ups and downs.

0:25:34.710 --> 0:25:35.860
P07: Yeah, exactly.

0:25:37.480 --> 0:26:6.730
P09: But now if we're trying to look at something to actually get an answer to this question.
Of what we can do to decide what these competencies are and how you make people competent and then you should start now for the next generation of people that are gonna go through who, cause we'll all be well, we'll all be in boxes shortly, I just mean P07.

0:26:10.20 --> 0:27:20.920
P07: I'm a lot closer than most that means No, I think I think P06 has made the point. It's both being consultant heavy and you know, I don't think the decision making process does. This is me speaking in a radiographer environment. You know, it doesn't matter how qualified that you know that radiographer may be. I think there's some frustration that sometimes they're expertise isn't fully tapped into to, to contribute towards that decision making process. It's almost like you know, alright, the consultant said this, you know, that's the decision made and they're not often consulted. And that's part of being aware. You know the SNO [senior nursing officer] or the clinical director being aware of the skill sets that are available in the experience available within their team and

utilizing that most effectively. So sometimes there are very talented people in the you know junior NCO, senior NCO level that aren't involved in that decision making process. Because it is so top heavy.

0:27:23.710 --> 0:28:37.240
AH: Again, this is it. This is a point that's come up for, I think. Uh, ***** alluded to corporate memory that in the sense that our corporate memory, we use it, we've got a generation now that our not being exposed to the operational setting simply because those operations just aren't going on. And I don't think we're likely to see an Afghanistan or an Iraq anytime soon, although if Putin keeps going is on his merry way, we might, but we we're losing that that corporate memory, I think. And we're having to go round and relearn the lessons that we were learning at the start of this. So, we've taken some of it, but it's how we how we then capture that and look at how we can, how we can move that on. Obviously, we've mentioned that so. Someone was gonna come in there and we've mentioned the experience. Is there any other way that we can help people to learn non-technical skills are certainly how to use them? And support their use in our current construct, or are there any sort of novel ways that you can think of that might be of use?

0:28:44.150 --> 0:30:14.490
P010: I think it and of to discuss this with P06 before, so it shouldn't be too much of a surprise, but I think our current model of JHG being sort of quite finance focused without getting too political and probably doesn't work in terms of the focus of what we're trying to to get out of the individuals that we put in jail, she is always going to be competing with that needs to, to compete for contracts. So, things like the 109 days business model to to extract people out, for exercise, etcetera. Just there's always going to be that competing agendas of the needs of the operational need versus the business model need and until that's squared away. I I don't think well we'll get to that in Havana of why these guys have been out on an exercise. That's realistic. It's funded and being the big one and I just not sure that we'll get to a point until we have another significant conflict. And where we have people SQEP trained, ready to go in the way that we were sort of 6-7 years ago when we were doing the business in Afghanistan.

0:30:16.850 --> 0:30:19.450
P010: Sorry, that's quite gloomy view out.

0:30:21.770 --> 0:30:22.900
AH: An eternal pessimist.

0:30:23.630 --> 0:30:46.700
P06: What, do you think some personal development for everyone? We seem to talk about doing a lot of leadership training and management training, but I think until you know kind of what your own values are and what your own biases are. It's quite difficult, isn't it?

0:30:52.290 --> 0:31:11.550
AH: So how do you find the teams that are coming through at the moment? See the guys who particularly the, UM individual augmentees. Do you find that they're SQEP'd and ready or is there a kind of perception that they're NHS SQEP, but they're not quite ready for operations.

0:31:16.10 --> 0:31:31.860
P06: Thing complete mixture, aren't we? We get a mixture of Tri service and reserve and regular should I say. Recently we have had in CFSG [Commando Force Surgical Group] who had worked and trained together. They built trust in each other and worked really well.

0:32:11.510 --> 0:33:36.350
P010: I would, yeah, absolutely. P06 that's on the money in terms of you that is the difference between the teams, if they've worked together or spend it invested a lot time during their PDT or had the opportunities to invest a lot of time during their PDT to get to know each other put you know, particularly if they've got to know each other in a stressful environment, they they've got all these sort of nuances. And that can trip them up during the validation and out before they hit go

and Yeah, I I think that that's probably the key to it all is and being together as a formed unit. I don't think for me there's any particular difference in terms of what we saw during TRENTON, going through to what we're seeing now, which is probably the closest thing to pre and post HERRICK and the deployments we've got now are so weird and wonderful in terms of the, the, the capabilities that were pushing out the door as well and it's difficult to have a kind of metric to judge would say P09's probably got more experience than I have though I given these sort of been knocking around for a lot longer than I have not seen your old mate but you know you are.

0:33:37.420 --> 0:33:38.790
P06: You look good for 80 today.

0:33:39.810 --> 0:33:42.0
P06: OK, 76.

0:33:43.760 --> 0:33:45.410
AH: Corporate memory from career is it?

0:33:46.860 --> 0:33:50.290
P09: Alright. Is there anything here? Everywhere I go…

0:33:54.30 --> 0:34:43.50
AH: Right. So, if we were, if, I could give you carte blanche to make any recommendations, obviously the clinical skills and the technical skills are what they are and they're kind of governed elsewhere. If I could give you carte blanche on right, how do we assess this? How do we move this forward? What can we do? This is an opportunity to hopefully feed into a process and what recommendations would you make for the assessment or development of non-technical skills going forward from here and do you think that we could add those into some form of sort more formalized assessment as per as people go through AMSTC?

0:34:53.40 --> 0:36:11.820
P09: I think if, as Chris mentioned earlier on about sort of the Air crew.
So this model if we could utilize that in a way and try and bend it round so it would fit sort of a small medical team and potentially point out to people communication skills and the personal skills they are short of. Emotional thinking. Everything else and actually give them a pointer to say you know, I mean you can't change people's personalities. Some people are just mean but you could point out that maybe they could work on it, so maybe if they're a team that didn't work for them or there was tension, there was, things weren't happening and it was down to sort of certain people's interpersonal skills and the way they spoke to people. And if that was pointed out to them, maybe before the end of Mission Training, the they could potentially go away, work on it. And when they came back from the validation exercise, they can potentially try and speak to people a bit better and give it more encouragement Etcetera, etcetera.

0:36:14.40 --> 0:36:17.10
P07: I'll let you explain that to have the consultants P09 that would be funny.

0:36:20.360 --> 0:36:22.810
P07: Well, you just go away and work at your personality P06.

0:36:23.180 --> 0:36:26.920
P06: And. But if it was happening in this.

0:36:25.860 --> 0:36:27.230
AH: There's a few I can think of.

0:36:28.500 --> 0:37:58.570
P08: But it was happening to everybody and everybody on the team because it might be you get the person that's always being picked up, they're always sort of messing up. They're always late.

You know if that was actually pointed out to them at the start as well. So not just saying, you know, the consultants are grumpy and they're always picking on me to do X, Y and Z. Well, maybe people are because like, we pointed to earlier on the OJARS or SJARS are subjective and it depends on who writes in them. But actually, if there's that report coming in from people looking in to say, well, actually you were late and you're untidy and you, the way you communicate isn't quite [right]. You know you're confusing things. If it was the whole team that it was getting spoken about, not just the hierarchy and it wouldn't need to be pointed out to everybody in a group so that everybody could point laugh. But if people were saying certainly pulled to one side to say look using this template, we have observed that, you know, you're not very confident when you're trying to speak to people of a higher rank than you or sometimes somebody's a higher rank. Maybe you should speak to people of a lower rank with, you know, a bit less aggression in your voice, you come across a bit bullying it. It can work up and down the whole chain so that people would know how to improve to make small teams work better.

0:38:0.900 --> 0:38:10.720
AH: Do you think there's a bit of do you think there's a scope for team training and individual training.

0:38:13.450 --> 0:38:20.900
P06: Yeah, I mean on the TST, P010, we did some really good stuff on feedback models and debriefing models. And I would have thought that any level in the military, those would be quite useful. Actually, you know, even just at PT today was chatting to one of the nurses he used to be in our unit. Unless it how going in a field unit? She said, well, I just actually AGAI everyone, every single minute of the day. She said it, you know, and actually maybe having some feedback and debriefing skills rather than just having gone from no, our guys to suddenly I going everyone and feeling like she's micromanaging people like, you know, they're all there's ways and models out there that might help us before we have to actually start.

0:39:5.380 --> 0:39:42.70
AH: And do you think we could? Is it something that you could envisage giving a package to the JHG [Joint Hospital Group] units, especially for their augmentees? I know you having come from being a DOCN down at ***** we were tied up quite considerably with COVID and that was a learning point in itself. But do you think some form of uniform type package or uniform tool would allow us to get some consistency across the whole of JHG or the IAs [individual augmentees].

0:39:44.720 --> 0:40:1.600
P09: Now we have J1-9. I mean the JHG they run leadership days, they run command tasks they do. They do all these things. I think they happened on sort of military training days, things happen.

0:40:2.740 --> 0:40:4.450
P010: There's a oh sorry P09.

0:40:2.760 --> 0:40:3.250
P06: Hey.

0:40:5.90 --> 0:40:5.980
P09: No, you don't, right?

0:40:6.380 --> 0:40:8.110
P010: No. You finished mate?

0:40:8.610 --> 0:40:9.470
P09: No, I was finished.

0:40:9.910 --> 0:42:29.350
P010: OK. And there's a really good video knocking around called and just a simple operation. I don't know how many of you have seen it. We've done human factors cause it's mandated for all

RAF personnel. So, it's basically part of our annual training. And it should have talked quite deeply about this guy who again on a keep on referring back to the air three piece and apologies, but he's a BA pilot and he lost his wife during a routine operation and it was because basically the anaesthetist got kind of tunnel visioned and then the whole sort of team collapsed around him because it is a bit of * **** basically to put it into simple summary. I think there there's real value in in doing something like that across the three services to sort of essentially make people more software. I don't think you'd see a massive groundswell in terms of changing attitudes, changing department before validation, I think that's too closely tied to basically just working together. So until you kind of scrap JHGN save the DMS about £3 billion a year on there, OF4 and OF5 wages and OF3 wages to be fair. And then I don't think you're gonna get there, but if you looking for minor changes having that. Because it's seen as you put a competency course in. So you put the human factors course in. Then you can relate it to some objectives that you make into a CTO. So that's then something you can a metric you can use against it. Then you can make comments on it during the exercise and until you put these pieces. So you've trained someone, you've then put a metric in place to measure it and then you've got the outcome, which is military judgment panel and until you have the sort of measurables in place. It's really difficult to make comment on it, otherwise you almost just picking on people.

0:42:31.320 --> 0:44:31.180
AH: Yeah, that's a really interesting point because that's where that subjective uh, that subjectivity comes in. Because you what one person may perceive to be actually that's just a robust dealing with another person may perceive to be something completely different. So no, I completely understand that and it's, it's interesting in terms of having some form of metric or having some form of way to try and capture this and that's kind of at the heart of this piece of research. Firstly to understand what we mean by competence and non-technical competence, but secondly to understand how, how is that gonna affect us as we assure people as they go out the door? I'm, as you mentioned, air crews do it. It's been banded around Med for a while. It's this isn't this isn't a new concept, but we need to look at ways in which we can kind of move this, move this forward. There are areas of Med that are dealing with it, so the non-technical skills for surgeons is a piece that's been produced by the Royal College of Surgeons for Edinburgh. That's worth a look at and it does cover off how an operating theatre works and the dynamics within that within that group. We're looking at something a little bit more sort of broad, is it something we can build into the defence operational competencies, the DONC framework. So, we've got, we've got lots that we're trying to figure out and that's my question set. You've actually gone through my question set quite quickly, which is quite nice, but there's some really good, interesting points in there. And that is it. Does anyone have any anything they want to add in as a as a back burner before I close things down?

0:44:33.630 --> 0:46:2.400
P06: I mean, I think the human factors piece, I know for the RAF you're mandated to do human factors, I wouldn't need to watch that Eileen Video again because it's rolled out in every trust I've ever been to. But I'm certainly the trust human factors, certainly the one at James Cook, they're doing some really, really good human factors and we are using the SIM suite an awful lot, which again is just a brilliant way of so just letting junior staff come into a safe environment, but that does seem to me that we could do human factors on a yearly or 2 yearly basis. Umm I don't you like the word mandatory training cause that should have makes it a bit. No, I think sometimes even just going through the lessons that we've identified and looking at Any of those ASERs that happened because of human factors. There was a really good way of almost saying using the ASER system and saying why did that happen and doing a root cause analysis makes you say actually 90% of that was human factors because the policy was there. The process was there, but it was the lack of communication or, you know the lack of understanding of the communication. But then you would need to put measurables into that, wouldn't you?

0:46:7.300 --> 0:47:5.880
AH: Yeah, that's the challenge at the 2nd. So, what I'll do is draw stumps. I'll draw stumps. Thank you very much for your time this afternoon. This is the second focus group I've held. And like I said, it's really interesting to see there's some common points between the last one, certainly some

common themes, but there's some very separate themes here as well that have been raised that I hoped would be raised because of because of the type of role that AMSTC does and you're exposure with that level of that level of training. So firstly, thank you very much for helping this will hopefully go on and become something a little bit bigger, but we'll see. We just got to develop the theoretical framework first and go from there just to reminder that if you do wish to withdraw any point before it's anonymized, please let me know.

APPENDIX XI – Additional Evidence Statements for General Characteristics in Construct of NTC

Axial Code	Open Codes	Additional Evidence Statements
General Characteristics	Resilience	*P026: I think it's that experience of **being able to cope**...being out of your comfort zone.* *P020: "…the Afghan era, that was constant. Mine was **constantly [busy]** you know, **sleep deprivation** was literally constant. So yeah.It wasn't it depends on what you know, what time what time you went in, and what was happening. But for me at the Aghanistan was the worst. For me. It's just constant.* *P020: The care that we give is second to none. It's the same, however, in whatever the environment we work in, we sometimes **have to adapt and work with what we have.***
	Credibility	*P005: "**I think credibility. That word credibility cause**, yes, the role modeling. But it's that trust and that authenticity in that person as well. Yeah, credibility."* *P001: "…military, credibility** is a non-technical skill that all of our healthcare professionals need… And I think as well that awareness that my credibility, or my **lack of credibility could affect my whole career** because it's such a small world in the military.* *P003: "it follows across from your **clinical credibility.** So yeah, we have to have that. We have that **military credibility** to maintain as well in, in, in terms of our interacting with military patients…"* *P03: "Yeah, but I also think it it's credibility.."*
	Courage	*P017: "And that comes back to **making the hard decisions**. Yes, people are **scared to make those decisions or the right decisions,** when sometimes it's hard to do it* *P03: "…It's courage as well. So **having the courage to then apply**, particularly in the leadership side of things…"*
	Adaptability	*P020: "Yes, yes. Because you've got UK, you've got less responsibility, you've got responsibility, but not as much as when you go out. **So you have to adapt**…"*
	Humility	*P016: "But then adding that to the list of things, it's almost like humility. Yeah, **ensuring that humility**... So, you're prepared to listen, and therefore, the other people show leadership and that is followship and so that's something else as well perhaps."* *P017: "Yes, I've been in the army 10 years. Yes, I know my shit when it comes to being an officer, but I have a brand-new nurse, I'm still learning, please just teach me everything you've been. So 15 years, Sergeant so-and-so. So please, we just take me under your wing and teach me stuff. Like you need to just be that kind of person. So that's, that's a characteristic. But having that if you don't own that…"*
	Situational Awareness	*P021: Looking, seeing, listening*