Competence to Practice on Deployed Military Operations: Preparing Military Nurses for their Role

by

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THESIS

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Statement of Originality

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Abstract

The aim of this study was to identify what factors enable British military nurses to care for patients when they are deployed in areas of conflict. The study also aimed to explore whether the peacetime employment of military nurses afforded them the necessary clinical and military experience to enable them to be competent to practice in their military role.

The study used a grounded theory approach and consisted of two parts. Part one was a survey which was distributed to all military nurses. It was designed to gather biographical data and data relating to how prepared the respondent felt to look after certain groups of patients. The results from part one suggested that participants did not feel fully prepared to care for the groups of patients cited in the survey. Around 50% of respondents indicated that they carried out roles and tasks for which they had received no training prior to deployment. The data implied that the nurses' feelings of preparedness increased with deployment experience. However, their feeling of preparedness was lowered when the nature of injuries seen on deployment changed.

Part two of the study involved 12 semi-structured interviews with military nurses who had participated in part one of the study. The findings from part two suggested that the peacetime clinical and military experience that military nurses possessed had an impact on their competence to carry out their role as military nurses on deployment. The findings of both parts of the study are used to form a theoretical framework based on Benner's (1984) theory of how nurses develop from novice to experts, but augmented to take into account the additional facets of the military nurse's role such as their nursing responsibilities on deployment, their peacetime role and the effect of postings and deployment on their experience. Military responsibilities and the effect of rank on clinical credibility are also taken into account in this framework.

The recommendations from this study suggest the need for the introduction of structured supervision for military nurses and a review of the Defence Operational Nursing Competencies. It is envisaged that the findings will be used to support changes to pre-deployment training.
Acknowledgements

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<td>AELO</td>
<td>Aeromed Evacuation Liaison Officer</td>
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<td>Aeromed</td>
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<td>Autoject</td>
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<td>HOSPEX</td>
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<td>ITU/ICU</td>
<td>Intensive Therapy Unit/Intensive Care Unit</td>
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<td>MDHU</td>
<td>Ministry of Defence Hospital Unit</td>
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<td>NCO</td>
<td>Non-commissioned officer</td>
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Chapter One

Introduction to the study

1.1. Introduction

This chapter will provide an overview of the chapters in this thesis. The Defence Medical Services (DMS) are made up of over 7000 medical personnel including doctors, dentists, nurses and allied health professionals (Ford 2009: 13). Whilst DMS personnel are managed and wear the uniforms of the Royal Navy (RN), Army and Royal Air Force they often work as a tri-Service team in both their peace-time role and when deployed in support of military operations. The Defence Nursing Service (DNS) is a branch within the DMS.

This study involves nurses who are employed in the DNS. Each military Service has a separate corps or trade in which nurses are employed. In the RN nurses belong to the Queen Alexandra's Royal Navy Nursing Service (QARNNS). Nurses in the Army belong to the Queen Alexandra's Royal Army Nursing Corps and in the Royal Air Force (RAF), nurses belong to the Princess Mary's Royal Air Force Nursing Service (PMRAFNS). Each military nursing service has a Matron-in-Chief who also holds the title of the Director of Nursing Services for the nursing service they head.

Nurses have worked in support of military operations throughout history; Florence Nightingale (Snowden 2010) and Mary Seacole (Royce 2010), are well known for their contributions to caring for the sick and injured in war. The military nurse's role has continued to develop throughout history but has seen challenges. Katherine Jones who was appointed Matron-in-Chief of the Queen Alexandra's Royal Army Nursing Service in 1940 elucidates that the importance of the military nurse was not always appreciated by medical colleagues. She suggested that
Military nursing practice has evolved to reflect the changing nature of injuries sustained in war and conflict which reflect the development of weaponry and tactics. In the 19th Century, ninety percent of injuries were inflicted by small arms fire. The 20th Century has seen a rise in both burns and eye injuries. For example, nurses in World War Two cared for airmen sustaining burns on flying missions. The Times (cited in Mayhew 2004) reports some 4,500 airman were rescued from burning aircraft. This high volume of casualties resulted in the establishment of additional military hospitals (Mayhew 2004). The changes in types of weapons used in war and conflict have resulted in a change in the type of injuries that have been sustained as a result of enemy action. Statistics from the Gulf War in 1991 shows that 63 per cent of these injuries were due to shell and bomb fragments (Galbraith 2001). In the current conflict in Afghanistan, the use of Improvised Explosive Devices (IED) has resulted in an increase number of fatalities. In the Iraq war fatalities from IEDs were 44 (June 2004 – August 2007). A total of 158 fatalities due to IEDs has been reported in Afghanistan since December 2006 (i.Casualties 2010). Whilst these figures represent UK personnel, it was reported by CNN that there that the number of IED incidents
overall ‘...increased by 94 percent within the first four months in 2010 compared to the same period in 2009’ (CNN Wire Staff 2010).

These statistics highlight the changes in war fighting over time and the injuries and fatalities that occur as a result of these changes. Galbraith (2001) in his study, which describes the changes to weapon systems and their effect on casualties, highlights the need for training of Defence Medical Personnel to be constantly reviewed and updated. Such changes will also require changes to military medical doctrine and treatment protocols (Galbraith 2001) to ensure that patients receive appropriate and optimal treatment.

The Defence Cost Study 15 (Ministry of Defence 1995) saw the closure of UK military hospitals in UK and Germany as it was considered that defence medical personnel were not exposed to clinical skills that they needed for their operational role, although no empirical evidence can be found to support this hypothesis. It was decided that Ministry of Defence Hospital Units (MDHUs) would be established. MDHUs are integral parts of NHS Trusts and military medical personnel integrate with NHS staff with the intention of enabling DMS personnel to gain clinical experience that is relevant to their operational role. There are six MDHUs which are located in Birmingham, Northallerton, Peterborough, Portsmouth and Derriford. Military hospitals are still in existence in Cyprus and Gibraltar as it is considered that the local health services in these locations do not reflect the standard that is expected in the NHS. In MDHUs military nurses are employed in clinical areas which include emergency departments, intensive care units, operating theatres and other areas where acute care is undertaken. The MDHUs also have wards in which the majority of nursing staff caring for patients are military nurses. For example, military nursing staff manage one of the elective orthopaedic ward at the MDHU at Peterborough district hospital. Military nurses are also employed in specialised clinical areas such as the intensive care
unit at the John Radcliffe Hospital, Oxford and at the Defence Medical Services Rehabilitation Unit, Headley Court.

Since the establishment of MDHUs no study has been carried out to explore whether or not military nurses are afforded the appropriate clinical exposure to give them the requisite skills for deployment. Indeed, such studies were not carried out when military hospitals were open to the knowledge of the author.

The DNS cadre is made up of nurses that are trained in the DNS and qualified nurses that are recruited directly. The DNS has recognised that newly registered nurses require post-registration consolidation and as such, are required to undertake a rotation programme which includes general surgical and general medical experience before they are considered fit for deployment.

1.2. **Background to the study**

Chapter two will describe the background to this study. As discussed, the overarching requirement for DNS personnel is to provide nursing support for military operations. Nurses are nominated for operational duties from their peacetime role. The author, a senior nursing officer in the PMRAFNS, has undertaken the role of the Officer Commanding Nursing at the MDHU at Peterborough. This role involved the management of military nurses who worked within the MDHU. Pivotal to the success of this role was the promotion of a professional working relationship with management executives of the Trust. During the tenure of this post, the author was responsible for the support of nurses who were nominated for Operation Telic One, which signalled the start of offensive in Iraq. The deployment of nurses was swift in the response for a requirement for military nursing support for this deployment. Indeed, most nurses who were physically fit left for service in Iraq. The loss of nurses from the Trust caused staff resource management dilemmas within the Trust. The resulting
staffing problems were mainly due to the speed at which nurses left and the Trust having to source additional personnel from other sources such as nursing and medical locum agencies. This caused some management conflict as it appeared that the Trust had grown to rely on the contribution that the military staff made to the Trust and did not realise that they also had a military role. To help the Trust staff understand the role of the military medical staff who worked within the Trust, the author explained the role of the military staff on deployment to numerous Trust management meetings. This was beneficial and resulted in the hospital executive taking an interest in those who had deployed. Indeed, the Director of Nursing of the Trust was proactive in writing and sending 'goodie' parcels to those who were in Iraq.

The urgency and speed at which military nurses left the MDHU gave minimal time for preparation. The author was concerned that nurses were not afforded the time for pre-deployment training. There was also concerns if nurses were being exposed to appropriate clinical experience as part of their peacetime role. The author was also concerned that the clinical areas that nurses worked did not mirror those that they would be expected to work on deployment; for example, areas such as elective orthopaedics. The nurses deployed had a range of nursing experience from those who had recently joined the military nursing services to those who had been in the Services for some time. Those military nurses who were nominated for deployment were allocated to posts on deployment by the military nursing service manning departments that work at the single Service headquarters. The senior nurses at MDHUs had little influence on the decision making process to identify which military nurses filled which posts on deployment. Moreover, the author did not have any insight to what nursing skills were required for a particular deployable post. However, it was obvious that specialist nurses such as those working in intensive care, emergency department
and operating theatres were deployed in their specialist roles. The author applied to the Defence Medical Deanery to carry out this study which has been duly approved and sponsored.

Since Operation Telic One, nurses have been deployed on a regular basis both to Iraq and Afghanistan. The increasing number of casualties from Iraq and Afghanistan demonstrate the ongoing requirement for military nurses to be deployed. Armed Forces Casualties in Iraq numbered 121 in the last three months of 2007 and rose to a peak of 281 in 2008. In Afghanistan, the casualty numbers recorded range from 163 in last three months of 2007 rising to 344 in the period up to June 2010 (Defence Analytical Services and Advice 2010).

At the start of the study, some scoping work was underway to inform the development of a competency framework for military nurses. These competencies, known as the Defence Operational Nursing Competencies were approved and promulgated in 2009. At present, these competencies are for land based nursing practice and apply to all military nurses who are deployed to work in field hospitals. Nursing competencies that cover military nursing practice at sea and in the air have yet to be written and endorsed by the DNS. The policy that accompanies the competencies direct that military nurses should not be deployed unless they have achieved the core competencies that make up the Defence Operational Nursing Competencies. The policy also directs that annual audits should be carried out to confirm that nurses are not being deployed unless they have achieved the core competencies that are included in the Defence Operational Nursing Competencies. To date this audit has not been carried out. The policy does not give any guidance to senior nurse managers regarding the procedure to follow if nurses are nominated for deployment and it is discovered that they have not completed the core competencies. Therefore, military nurses
may still be deployed without the appropriate competencies to meet the needs of the operational imperative.

Military nurses now undertake preparation prior to deployment. This preparation includes military preparation and role preparation where this available. For example nurses working on the Medical Emergency Response Team (MERT) will undertake MERT training which includes helicopter familiarity. The majority of nurses will also attend a military field hospital exercise known as HOSPEX. It is intended that the HOSPEX will give the medical team who are about to embark on a deployment exposure to a simulated field hospital environment and the equipment that they will have available to them. HOSPEX is also an opportunity for the team to work together as they will be made up of personnel from different areas of the DMS.

1.3 Review of the literature

Chapter three will describe the literature review for this study. Grounded theory was the chosen methodology for both the quantitative and qualitative part of this study, which will be discussed later. With this methodology it is advised that a literature review is not undertaken before data is collected and analysed (Strauss & Corbin 1990, Charmaz 2008, Moore 2010). However, Strauss and Corbin (1990) suggest that the researcher will start a study with some knowledge of the literature. In this study, a literature review was carried out firstly to enquire if any other similar studies had been undertaken. Secondly, a literature review was a requirement of the Ministry of Defence Ethics application process. Moore (2010), who used a grounded theory approach, suggested that undertaking a literature review before the study enabled her to frame her research question.

The key words used for the literature review included competence, nurse competence, military nursing, deployment, leaning and nursing and adult
learning. The author found that there was a dearth of literature which related to military nursing. Historical data about military nurses on deployment are mainly personal accounts but indicated that specific preparation for military nurses was patchy and not always available (Scannell-Desch 2000, Mackie 2001, Scannell-Desch 2005, Tyrer 2009). The literature was based on events from the Vietnam War through to present day. Accounts that were part of historical novels of the military nursing services were also reviewed.

As the study set out to explore military nurse's competence on deployed operations, it was considered appropriate to review literature that was related to learning. This part of the literature review was not intended to be a detailed review of the underpinning aspects of pedagogical theory, but was intended to provide a synopsis of adult learning that may relate to the achievement of competence in general.

The literature review also includes an overview of the DMS since changes were made following the Defence Cost Study 15 in 1995. The different modes of entry for nurses into the DNS is described, as is the differentiation between nurses who form the commissioned and non commissioned cadres. The promotion system for military nurses is put into context which will give the reader the background of how nurses are promoted and the relevance of their rank compared to their nursing practice experience. This is felt appropriate because military nurses have a dual role as they are both registered nurses and members of the military nursing services.

The work of Benner will also be explored because her theory (Benner 1982a) describes how nurses move through the stages of novice, advanced beginner, competent and expert practitioner. The transition is dependent on the nurse's experience in a clinical setting and their ability to use intuition in practice. Benner
describes that novice nurses are dependent on rules and guidelines for practice. In contrast, expert practitioners are not dependent on written guidelines and are able to use their experience to react to given situations from repeated exposure to similar situations. Benner also describes the expert nurse's ability to use intuition in their practice. The author will explore how Benner's theory relates to military nurses when their experience is fragmented due to absences from the practice setting while on deployment which can last for periods of three to six months and postings which can occur every two to three years. Moreover, the author wanted to explore how are military nurses are able to care for patients who have suffered catastrophic injuries on deployment when they are not exposed to these types of patients in their peacetime role.

In keeping with the facets of grounded theory, the theoretical framework will not form a framework for the testing of a hypothesis (Strauss & Corbin 1990, Charmaz 2008) but will contribute to theory development. Therefore, the theoretical framework will be constructed and discussed following the findings of the study.

1.4. Methodology

Chapter four describes the methodology that was used for this study, which included both quantitative and qualitative methodologies. The chapter will introduce the reader to the reason why the researcher chose grounded theory as the methodology of choice. Whilst qualitative research methodologies have become popular in the nursing profession because of an interest in exploring the experiences of patients (Jack 2010), the author did encounter challenges with the acceptance of a qualitative approach during the MoD ethical approval process as there appeared to be more emphasis made regarding the value of quantitative research studies. However, this was not the reason behind the
decision to use both quantitative and qualitative methodologies in this research study. Mixed methods are conducive with grounded theory (Strauss & Corbin 1990, 2008, Charmaz 2008) and the use of triangulation aimed at giving more depth to the data from the study. Also, it was hoped that the data obtained in part one of the study would be confirmed by data acquired in the second part of the study. It was also felt that the second part of the study may also highlight any missing data that was relevant to the study as a whole (Bryman 2008).

As already mentioned, the quantitative aspect of the study was a survey that was distributed to all members of the DNS. The survey aimed at supporting the reasons to undertake the study by asking respondents to identify how well prepared they were to undertake a particular task or role on deployment and if they had undertaken any tasks or roles on deployment for which they had received no training. The survey also gave the respondents an opportunity to indicate if they would be prepared to be interviewed about their experiences on deployment.

The second part of the study involved undertaking semi-structured interviews with military nurses who had volunteered. The aim of the interviews was to gain a deeper understanding of the preparedness of military nurses who had been on deployment to Iraq and Afghanistan. The details regarding the selection of participants for this stage of the study will be described in this chapter.

1.5. Method and analysis – part one

Chapter five will describe the method of collecting and the interpretation of the data for part one of the study. This chapter will also describe the reasons behind choosing grounded theory as the methodology for this study. It was acknowledged that that there are different schools of Grounded Theory, the author decided to use the method described by Corbin and Strauss (2008) as the
process for data analysis was more structured. Consideration was given to the fact that structured data analysis may make the process more difficult (Cooney 2010). However, it was felt that guidance pertaining to data analysis was an asset given that the author was a novice in grounded theory methodology.

As discussed, part one of the study was a survey in the form of a questionnaire and this chapter will give the reader an insight into how the survey was designed and distributed and the process that had to be undertaken for ethical approval. Analysis of the statistical data was carried out using SPSS, a quantititative data analysis computer software programme. The survey included a Likert scale for respondents to indicate how well prepared they perceived they were to care for certain groups of patients, and free text areas were also included where respondents could write comments about new tasks and roles that they had undertaken on deployed operations.

This part of the study demonstrated that military nurses deployed in support of military operations felt that they were not fully prepared for their operational role. In addition, about 50 percent were undertaking tasks and roles for which they had not received any training. The conclusion from the data analysis provided the justification for part-two of the study.

1.6. Method and analysis – part two

Chapter six will describe part two of the study which was a qualitative study comprising of semi-structured interviews. Participants were chosen in line with a participant selection criteria which included the requirement for participants to have served in Iraq and or Afghanistan. Interviews were semi-structured with the intention of enabling the participant to give an account of their experiences. The chapter will also give an account of how the interviews were planned and executed. Data from the interviews were analysed by using NviVo 8 which is a
qualitative data analysis software programme. Data were coded in line with the
grounded theory process which included open coding, axial coding and selective
coding leading to a core category (Strauss & Corbin 1990). At the conclusion of
the axial coding process, a summary of ‘the story so far’ gives initial thoughts of
the researcher regarding the findings from the data that had been collected. The
chapter will also give examples of memos the researcher wrote during data
collection and analysis.

1.7. A review of part one and part two findings

Chapter seven will bring together the findings from part one and part two of the
study. All data are relevant in grounded theory and the use of specific types of
data is not prescriptive (Glaser & Strauss 1967) as alluded to earlier. Therefore it
is important that all data are reviewed when discussions of the findings take
place.

1.8. The emergence of a core category

Chapter eight gives an account of the development of the core category. This
chapter will bring together the findings from part one and part two of the data to
build a core category which will identify the factors that affect the military nurse’s
competence to practice on operations. The findings from the study will contribute
towards the emergence and development of theory. In addition, the findings from
the literature review will be used to compare, contrast and support the findings
from the study. The chapter will also discuss any new literature that has been
found that are relevant to the study.

1.9 Discussion and findings

Chapter nine highlights the importance of adequate preparation of military nurses
for their deployable role. It is accepted that training and preparation cannot be
given to cover all eventualities. The chapter will describe how the theoretical framework and emerging theory can inform the training strategy for military nurses. As no study has been carried out to explore the competence issues of military nurses in their deployable role, it is intended to use the findings to support a proposal to ensure that military nurses receive relevant training and feel more prepared to undertake their role. The chapter will also discuss how the findings can give an empirical research base to the Defence Operational Nursing Competencies.
Chapter Two
Background to the study

2.1. Statement of the research problem

Nurses are employed by the DMS to provide nursing support as part of the DMS on deployment in terms of conflict and war. The role of the DMS is:

'...to support deployed operations, starting in the UK and extending beyond an operation's conclusion.'

(The Development Concepts and Doctrine Centre 2007: 1-5)

Although it is not specifically articulated in the document, it is assumed that this statement encompasses the preparation of military personnel for deployment and the health screening of individuals before deployment in addition to their healthcare whilst on deployment and the support of patients if they require repatriation. The importance of the effective delivery of healthcare in an operational setting is highlighted in the Joint Doctrine Publication which details the doctrine for Medical Support to Joint Operations (The Development Concepts and Doctrine Centre 2007). These include the following components that the DMS contribute to:

a. The Conceptual Component. The Conceptual Component shapes the ability to fight. It combines lessons from the past, thinking about how the Armed Forces can best operate today and in the future, and techniques for understanding the prevailing situation. [The medical contribution here is described in more detail later in the document and includes medical evacuation, triage and mass casualty and incident response planning].
b. **The Morale Component.** Troops require motivation, leadership, management and morale in order to be effective. Morale cannot be achieved and maintained without the expectation of high standards of medical care and casualty treatment.

c. **The Physical Component.** The physical component of fighting power is a means to fight. It has five elements; manpower, equipment, collective performance and sustainability, that in turn generate readiness. Medical support maintains troop strength, maintains human performance and provides timely clearance of the battle space; all these aspects promote troop combat effectiveness, as force enablers.'

(The Development Concepts and Doctrine Centre 2007: 1-4)

Therefore, the DMS have an important role to play on deployed operations in ensuring that personnel are fit to undertake their combat role and also to treat, and if necessary, evacuate patients for more appropriate medical care.

The research problem that the author wanted to explore in this study is that nurses are currently employed in MDHUs in a variety of settings which include intensive care, operating theatres, emergency departments as well as working on medical and elective surgical wards. The injuries that occur in times of conflict and war will depend on the weapons used and may evolve during the conflict. Therefore, how does the peacetime employment of nurses prepare them for such a varied and often demanding role?
2.2. Research objectives

The research objectives of this study were to carry out both a quantitative and qualitative study of serving military nurses from all of three of the Services using a grounded theory approach. As a quantitative approach, the survey enabled the researcher to target a large population to explore the preparedness of military nurses for their role on deployed operations and whether their preparedness would have an impact on their competence to practice on deployed operations. As this study would be sponsored by the Defence Medical Service Deanery, the objectives of the study had to be relevant to Defence Medical Services Practice for the researcher to secure funding for the study.

2.3. The research question

Maxwell (2005) suggests that the research question should 'identify things that you want to understand' (Maxwell 2005: 69). The nature of qualitative research methods directs that the research question should be broad to enable the researcher to explore a variety of issues (Corbin & Strauss 2008). Therefore, the research question will cover both the qualitative and quantitative elements of the study. The research question posed was:

MILITARY NURSES COMPETENCE TO PRACTICE ON DEPLOYED OPERATIONS: HOW WELL PREPARED ARE THEY?

The research question was developed to consider how military nurses gain their clinical experience in peacetime. As a senior nurse manager in the PMRAFNS, the researcher wanted to ascertain whether or not military nurses were adequately prepared for their deployable role.
2.4. Objectives of the study

The objectives in the study are:

- To ascertain if military nurses have the requisite skills to ensure competence to practice when they are on deployed operations.

- To explore the contribution of previous military nursing experience in the abilities of military nurses to undertake their military nursing role more effectively.

- To explore the impact of the current pre-deployment training on the military nurse's competence to work in an operational environment.

- To explore the military nurse's ability to adapt skills learned in their peacetime role to those required on an operational setting.

In essence, does the current peacetime training and experience prepare military nurses to fulfil their operational role? A review of the literature (see chapter three) highlighted the dearth of research information on this topic. Indeed, to date, there has been no research carried out in the UK regarding the issue of the competence of military nurses in relation to their military role.

Whilst the research question and objectives were set at the start of the study, it was accepted that these may change in the light of analysed data (Moore 2010). Changes would occur in both deployments and pre-deployment training may evolve over the period of the study.

Grounded theory methodology suggests that the researcher may demonstrate bias by articulating their own experiences in a research study, but the author believed that the use of his personal experience was appropriate in this study.
Walls et al (2010) describe this dilemma of not using prior experience, as suggested in classic grounded theory, but concludes that the advantages of using the researcher's previous experience and knowledge of a subject area can go towards the understanding of a particular phenomena and help with the interpretation of the data.

Therefore the experience and knowledge of the researcher in addition to the lack of research evidence provided a platform for the development of the research question and objectives.
Chapter Three
Literature Review

3.1. Introduction

This literature review formed part of the supporting evidence for the proposal to undertake research regarding the competence to practice of military nurses being deployed to Iraq, Afghanistan and other areas in support of military operations during times of conflict. The search of the literature was carried out using the University of Surrey library and Royal College of Nursing on-line library facilities. Databases, including Medline, Ovid and the Cochrane library were accessed as well as the Google search facility. The following key words were used to find relevant literature:

- Competence.
- Nurse Competence.
- Military Nursing.
- Deployment.
- Learning and Nursing
- Adult learning.

The key words were mixed to refine the search to address the research question. The search using Ovid resulted in 17 articles which were related to nursing competence. A search was then carried out using the EBSCO search engine which yielded 462 references were nursing and competence was referred to in the text or the title. The search was refined to military nursing and 170 references were found. However, when specifically searching for military nursing competence, no literature was found.
The findings following the literature review have been grouped in themes which include, nurse competence, learning as adults, learning theories, the needs of the learner and learning with others. The learning needs of the organisation, the motivation to learn, the nurse’s requirement to learn and the developing professional will also be discussed. The final section is devoted to military nursing which includes discussions regarding recruitment, career development and deployments. These themes are discussed regarding their relevance to military nursing and the role of the registered nurse in the Defence Nursing Services including their roles on deployed military operations.

3.2. Nurse Competence

A review of the history of nursing competence was carried out by Bradshaw (2000). The review highlighted the changes that have occurred in the perception of the definition of competence in nursing practice. Until the 1970s, writers of nursing textbooks highlighted the competencies that a practitioner had to possess in order to nurse effectively. These concentrated on specific aspects of nursing practice such as ‘...to develop the moral character of the nurse...equip the nurse with the requisite knowledge and skills needed for the purpose of nursing care....’ (Bradshaw 2000: 323). The study also suggested that the mode of learning was primarily by following the direction of the ward sister and was enhanced by relationships both with colleagues and patients (Bradshaw 2000). The ward sister was seen as an essential role model for students to follow as they were seen to be pivotal in leading patient care and were able to implement changes that would ultimately improve quality of care at the point of the delivery. The ward sister was therefore acknowledged as being an essential learning agent in the practice setting. Indeed, the ward sister and other members of the healthcare team are still an essential constituent for nurse training (Bradshaw 2000, Allan et
al. 2008). However, the mode, methods and delivery of nurse training have changed significantly following the move into higher education from the traditional schools of nursing.

Different methods and delivery of training may influence how effective the nurse is in practice following initial registration. The competencies of newly qualified nurses in relation to whether they had completed a graduate or diploma programme has been explored by Bartlett et al, (2000). Data were collected from 52 graduate nurses and 28 diplomate nurses from different universities. The data were collected by means of a questionnaire at graduation and then at six and 12 months following graduation. Questionnaires were also completed by their mentors/supervisors. The results showed that there was a difference in the competencies of the degree and diplomate nurses. Despite the diplomates scoring higher in leadership initially, over the period of six months to one year the graduates made up ground. The graduates were also found to be more active in continual professional development than that of diplomates which could indicate their acknowledgment of the need to improve and develop their knowledge and competence in practise, but this is not confirmed in the study. Reference was also made to the fact that the diplomates might need support in Continued Professional Development during their career, but the reasons supporting this fact are not described in any detail. The study by Bartlett et al also makes reference to the lack of nationally agreed competencies. However, the Nursing and Midwifery Council (NMC) are currently reviewing pre-registration training objectives and the methods of the assessment of competence at stages through nurse training (Nursing and Midwifery Council 2009) which may be seen as moving towards a more structured approach to student nurse assessments.

Despite the acknowledgement that a nurse needs to be competent to practice there is confusion about the definition of the word competence (Watson et al.
The Oxford Dictionary defines competence as having the ability or authority to do what is required" (Pollard & Liebeck 1994). The dictionary definition is quite vague and does not encompass all the elements involved in deciding if an individual is competent to undertake a role or task, which will be discussed later. Given the lack of a robust definition there remains confusion over what competence, or being competent is. In a systematic review carried out by Watson et al (2002) the relationship between competence and performance is questioned due to the lack of clarity regarding what constitutes competence. More importantly, the review suggests that such a dilemma with regards to the concept of competence will ultimately have an effect on the assessment of competence itself. Illeris (2008) identifies that employers often articulate the competencies required to undertake a particular job/role and as such are often task based.

Various methods of assessing competence have advantages and disadvantages (Bartlett et al, 2000). Studies undertaken in the UK tend to concentrate on a qualitative approach to measurement whereas studies in the US use a more quantitative approach based on task assessment. Such assessments haven been criticised for been reductionist and not taking into account other factors such as personal perceptions and values (Bartlett et al, 2000). A quantitative study carried out by Meretoja and Leino-Kilpi (2003) compared the competence self-rating of nurses and by their managers. Data were analysed utilising a questionnaire, which included questions pertaining to categories such as helping interventions, ensuring quality and the practitioner’s work role. The questionnaire also included questions on the subjects of teaching and coaching, diagnostic functions, managing situations and therapeutic interventions. The findings established that the managers rated the competence of their nurses more than that of the nurses themselves. The major differences were found in the teaching
coaching roles where the results demonstrated that teaching roles accounted for less than two per cent of the observed activities. Moreover, experience in a particular work setting showed a positive correlation to the individual's own perception of competence. The lowest competence measure in the study was found to be that of ensuring quality; whether this is due to the pressure of having to meet Trust targets or a lack of resources is not indicated. Improved feedback from managers and supervisors regarding an individual's performance was also seen to result in the improved performance of the individual.

A phenomenological approach to the assessment of competency in clinical practise was carried out by Girot (1993). The study explored the competency of student nurses as seen by ten experienced practitioners. Four common attributes were identified in the study; trust, caring, communication skills and knowledge/adaptability in student nurses. Competence was seen as related to both the psychological construct of the individual and also their overall performance in their role. A further finding of this study indicated that the student appeared to focus more on specialised skills when they were in their third year of their post-registration period as opposed to their emphasis on basic skills and holistic care in their first two years of training. However, Girot (1993) does not explain what these specialist skills were or whether this finding indicated that by the third year of training the student felt competent and confident to carry out basic skills and were then able to concentrate on widening their skills sets on more specialised areas of practice.

In a study of nurses who administered chemotherapy medication, Verity et al (2008) suggest that competence development is related to clinical experience and education. The relationship between experience and competence in nursing practice is identified in other countries were guidance is articulated regarding what competency levels should be achieved at different stages of training. For
example, in Australia beginning level competence details the minimum level of competence for registration. Also, continuing competence and identification of currency of practise are an essential aspect to enable the practitioner to re-register in many states (Pearson et al. 2002).

As well as achieving competence, the practitioner needs support in the workplace and the need for support of the newly qualified nurse has been recognised in the United Kingdom (DH, 2008). A study carried out by King's College London suggested that most nurses would like some form of preceptorship and that nurses felt that the optimum period for this should be four months following registration (Kings College London 2009 [online]). Such recommendations tend to concentrate on the newly qualified nurse.

3.3. Learning as Adults

Learning theories, style, motivation, environmental factors and the requirement for the practitioner to demonstrate continued professional development as a requirement for re-registration will have an impact on how the practitioner acquires new knowledge is pertinent to this study.

3.3.1. Learning Theories

There are a plethora of texts and research regarding learning theories. Whilst an in-depth analysis regarding specific learning theories is beyond the scope of this literature review, learning theories do appear in the literature that pertains to competence. For example, Piaget (1929) described how cognitive development is related to a child's development. Kolb (1984) developed this work on child
learning into the Kolb's learning cycle, Fig 3.1, which relates to adult learning.

Fig 3.1. Kolb’s Learning Cycle (Kolb 1984: 33)

Kolb suggests that learning can start at any stage in the cycle. Learning using reflection is acknowledged as a vehicle for learning and development in nursing in the caring professions (Carper 1978, Johns 1995, Rolfe et al. 2001) and Kolb’s learning cycle indicates that reflection is an essential component part of the learning cycle. However, the simplicity of Kolb’s learning cycle does not emphasise the importance of other essential elements of learning such as the social constructs of gender and age which will have an effect on the learning
process (Benner 1984, Jarvis 2006, Illeris 2008). Norman (1982) describes three modes of learning, which are worthy of note as he also highlights the need for reflection to build on and change practice if and when required. The modes of learning include accretion, structuring and tuning. Accretion is the addition of knowledge to personal memory, structuring is the organisation of new concepts and tuning is the adaptation of these new concepts in relation to a specific task. The restructuring process requires the ability to reflect and have insight known as metacognition. The analogical process then develops and modifies schema, including plans, thoughts and actions following an experience and exposure to new schema. Norman's work is relevant to this study as it implies that a practitioner will adjust their practice dependant on a situation and previous experience using a reflective process. Illeris (2008) adds further dimensions to learning and describes three elements that are integral to learning as competence development as detailed in Figure 3.2 below:
Illeris (2008) suggests that to learn, there needs to be three elements present which include content, incentive and interaction. Illeris (2008) posits that the key components to learning are action, communication and cooperation. The interaction element highlights the social aspects of learning. The content of learning is associated with the functionality gained from learning and the incentive for learning is related to the sensitivity of the individual. In essence Illeris (2008) suggest that this model takes into account the diversity of learning.
The maturity of the student will also have an effect on the learning process as will the intention and motivation to learn which are also key aspects of the learning process. Moon (1999) suggests that if motivation and intention are not present learning will not take place.

Trulock and Courtenay (1999), describe the change in learning styles as individuals gets older. With age comes experience which will ultimately have an effect on how an individual tailors their learning. Trulock and Courtenay build on the stages that were described by Kolb (1976 & 1984) which include the acquisition stage, which is the stage from birth to adolescence where basic learning takes place. Early adulthood sees the specialisation stage where adult education and career training are the foci for learning. The integration stage of learning begins in mid career. The study also concluded that younger individuals prefer a more active style of learning.

Levinson (1986) goes on to suggest that there has been little attention paid to the development of adults compared with children and older adults (gerontology). He describes stages of development from pre-adulthood to old age which he describes as eras. Levinson goes on to describe the second era taking place between the ages of 17 to 45 years of age which is signified by occupational growth and acceptance that life choices are for the good. The third era takes place from the ages of 40 and 65 years of age where an individual may become responsible for their own work and the work of others. It could be argued that both these eras afford the individual an advantageous period for self learning and the learning support of others. Quinn (2000) agrees that such findings should be taken into consideration when teaching adults.
3.3.2. The Learning Environment

Whilst not directly related to competence, the method in which learning is facilitated, taking into account the difficulties and different needs of the adult learner, needs to be acknowledged. This is pertinent to nurse education, especially in post-graduate nurse education and is worthy of consideration. Such issues have been explored and research suggests that issues pertaining to nurse education are not straightforward, as nurse education is not based on one educational theory alone. Cowman (1998) suggest that it is the context of learning which is most important. Cowman's (1998) suggestion could be related to the debate regarding a perceived gap between theory and practise (Grussing 1984, Scholes & Endacott 2003, Nursing and Midwifery Council 2005).

There have been numerous discussions on how well prepared nurses are for practice and whether there has been too much emphasis on the academic aspect of nurse learning, since nurse education moved from schools of nursing into higher education institutions (Burke 2003). This perceived theory/practice gap could have been as a result of the sudden move into higher education following the closure of schools of nursing that was described by Burke (2003). Also, the role and responsibilities of the ward sister have changed with emphasis being placed on management and the teaching of the fundamentals of basic nursing care being left to health care assistants (see chapter 3.2). The involvement of other members of the health care team such modern matrons in teaching of nurses in a practice situation is still evolving (Allan et al. 2008) and their value to nurse education has not been quantified.

It is interesting to compare nurse training before and after the introduction of Project 2000. Whilst a detailed account of Project 2000 is outside of the scope of this study, Project 2000 aims included the development of a single-level
practitioner who would be competent across a wide range of nursing disciplines including hospital and community settings. Nurses were to be supernumerary members of the nursing team with emphasis being placed on the holistic needs of the patient (Buckenham & Slevin 1992). These differences in learning in nurse education were explored in a study that was carried out in Ireland (Cowman 1998). The study had the advantage that despite being carried out in 1997, it was able to compare and contrast two types of nurse training that were taking place at the same time which were the traditional nursing curriculum and Project 2000. The study looked into four different approaches and how they applied to students on the different courses. The approaches included meaning orientation, a reproductive approach, a strategic orientation and a non-academic approach (Cowman 1998). Meaning orientation applied to students who were intent on discovering meaning when studying. Some students also used a reproductive approach. These students skimmed through study materials with the intent on reproducing information especially for exams. Students who took a strategic approach tended to explore research findings and their wider application. Students in this category tended to be well organised in their study habits. The final group included those with a non-academic orientation. These individuals usually lacked motivation and had superficial understanding of academic material. Overall, the highest mean score was in the meaning orientation group with the lowest mean score being in the strategic orientation. However, the diploma students scored higher in strategic orientation compared to the students on the traditional courses. More interestingly, there were differences in the speciality cohorts. For example, the nursing students on a psychiatry pathway demonstrated a more positive learning attitude. Unfortunately, the study does not specifically identify the possible reasons for this.
The reason why nurse training moved into higher education (HE) establishments is worthy of note. The closure of schools of nursing in the 1990s signalled the recognition that higher education establishments would be more suitable to provide nurse education and to bring nurse education in line with other healthcare profession (Barton 1998). Barton describes how financial and organisational considerations were not taken into account when the transition of nurse education into higher education was agreed. Barton (1998) explored the issues surrounding the integration of nursing and midwifery education into higher education establishments. The study explored the views of nurses and teachers using a mix of questionnaires and interviews. The findings included dilemmas and lack of clarity for the move. Not all personnel involved in nursing and midwifery education had a positive experience following the move. For example, nurse teachers found that there was a dichotomy with their roles as they were required to work in both the academic and clinical environments which, they felt, affected their credibility in both camps. Moreover, they suggested that they did not have enough time in the clinical environment. Barton's study also refers to a 'theory/practice' gap in nurse education with the theoretical component taught at university being 'out of kilter' with practise in the workplace. However, it is acknowledged that this study was done some time ago.

Nevertheless, the need for support for both student and newly qualified nurses in both practice and education cannot be ignored. The latest proposals for mentorship of the newly qualified nurses described earlier confirm this. Moreover, the importance of mentorship of other nurses on educational programmes has been articulated (Nursing and Midwifery Council 2008a). Therefore, the move to HE for nursing education and the changing roles of personnel within the clinical setting leads to confusion about who supports the learner in the workplace (Allan et al. 2008).
A mix of lecture and learning in the workplace are seen as essential components for nurse training. Workplace learning, as well as working in smaller groups, can enhance the learning process (Platt 2002). Platt, also refers to the necessity for workplace learning to ensure practitioners are fit for practice. This requirement is also articulated by Benner (1984) who posits that competence can only be achieved by practice in the clinical environment. Clinical practise placements can be supplemented with simulated practice in skills laboratory (Wagner et al. 2009). Simulation offers the benefit of being able to practice in a safe environment at a pace that is conducive to an individual's speed of learning (Haidar 2009). The benefits and drawbacks of simulation in the competence assessment will be discussed later in this chapter.

The benefits of learning in the workplace for nurse students have been highlighted by various studies (Benner 1984, Fenwick 2000). Whilst it could be argued that experiential learning can be unstructured and therefore lack direction, the value of experiential learning cannot be underestimated. Indeed, cognition can be enhanced by experiential learning to produce effective learning outcomes (Fenwick 2000). However, Dewar and Walker (1999) describe the challenges to experiential learning. They suggest that individuals, such as managers, should have an input in experiential learning. Billett (2004), suggests that there is a significant role to be placed by the individual to realise the actual benefits of workplace learning. Moon (1999) highlights the importance of cognitive learning during experience and gives caution to viewing experiential learning as just a way of copying tasks or procedures. Such learning in action should lead to the experimentation of new skills with subsequent reflection and as such, should be an ongoing process (Kolb 1984, Moon 1999).

Learning practice in educational institutions, especially in simulation, can be inauthentic by not taking into account other aspects that are involved in
completing a task such as environmental constraints. For example the giving of an injection can be taught in a classroom, but it is not until the nurse practices on an individual that other unique aspects of the procedure can be taken into account. Therefore, despite an individual knowing how to undertake a task, the way it is achieved will change depending on the situation (Benner 1982b).

Rømer (2002) explored situational learning and assessment and highlighted other contributing factors to learning such as the social influences that may be present in a learning situation which will ultimately have an effect on the learning process. Rømer also suggest that situated learning “...focus[es] on knowledge as it is found and developed socially in [a] practical context” (2002: 233). This endorses Benner’s view that practise is essential for learning and the move from novice to expert practitioner is dependent on this. Other authors support this view (Kolb 1984, Illeris 2008). In addition, Fenwick (2000), puts forward three elements that are integral to experiential learning. Firstly, the theoretical underpinning of phenomenology that suggests that reflection is an analysis of the learner’s way of observing an activity and thinking about it. Secondly, critical theory tradition, where culture, self-experience and other factors are factors that influence learning. Finally, structure and action theory, where thoughts are consolidated and transferred into action.

Experiential learning can also be augmented by the use of simulated practice as discussed earlier. Simulation can be used as a precursor to actually carrying out a task in the ‘live’ clinical environment and can be used as a tool to assess clinical competence.

Walsh et al (2009) carried out a review of studies concerning the role of objective structured clinical evaluation (OSCE) of clinical competence. The findings of their study acknowledged that there is a place for OSCE in nursing and it provides a
platform for assessment that is cheap, safe and can lead to improved patient outcomes. However, Walsh et al (2009) do include concerns raised in other studies. For example, it is suggested that OSCE does not reflect the true nature of nursing and OSCE reflects a more task orientated approach to learning. This is congruent with Benner’s (1984) theory that the nurse can only move from being a novice practitioner to an experience practitioner following repeated exposure to similar clinical events in a practice setting.

The construction of knowledge following a learning experience will also be dependent on the influence of other factors such as the situation, culture and gender which needs to be acknowledged by the educator. Dewar and Walker, (1999) suggest that educators often take on a supervisor role and that their role in experiential learning was often unclear. In their study of seven community nurses and five managers, they concluded that the role of the educator in the aspect of experiential learning was not well defined. Moreover, the educators were unsure of their role and the role of formal education overall. It was concluded that these concepts were not developed enough to support workplace learning. Therefore, the role of the educator in experiential learning requires more research but it is acknowledged that this study was carried out some time ago.

3.3.3. The needs of the learner

The needs of the learner have been discussed, but the personal skills and qualities of the nurse teacher need consideration. Forbes and Prosser (2005), in their study of nurse teachers suggest that the nurse teachers were influenced by their own experience in the way that they taught. Nicholls (2000), highlights the importance of teachers using different learning strategies to facilitate positive learning outcomes. Forbes and Prosser’s found that the aspect of “being safe to
practice skills” were seen as very important in the study. The more formal aspect of education was highlighted with 65% of the teaching being “teacher centric”. The study concluded that the quality of teaching improved when the differing needs of the student were acknowledged. Such needs include the consideration of age which has been discussed earlier.

Asking questions and challenging current practice is an essential element of learning and development but the practitioner may find this difficult, especially post registration and working in a new area of practice. Little (1999) endorses this and found that nurses who felt free to ask questions in a practical nursing environment used this as a key to learning. However, nurses felt more comfortable with this if they were not practising in their own environment. The fact that they felt uneasy in asking questions in their own clinical area is interesting. The participants in the study felt the anonymity in working outside their place of work a distinct advantage to their learning. Hallin and Danielson (2007) in their study of nurses who had been qualified for six years found that the participants felt that they had made significant development following working with patients. However, the research skills that they used as a student were seldom used once they were qualified. It was interesting to note that the participants felt that the emphasis on evidence based practice was not as pivotal to promoting best practice as they thought it would be.

3.3.4. Learning with others

Working as a team is essential in any healthcare setting, especially in specialist areas such as intensive care or emergency nursing. Team working also has the added advantage of being yet another medium for learning with practitioners being able to share and observe practice that is being carried out by a more experienced practitioner. Bleakley, (2008), highlights the importance and
necessity of specialist team learning so teams, such as intensive care teams, can function effectively. He also suggests that argument and dialogue within the team is a tool for growth. Van-Offenbeek (2001) also points to the advantages of team learning including the aspects of divergence in team working. This study also suggested that repetition of a team task and memory of the task will improve performance. This supports Benner's (1984) theory of development from novice to expert practitioner is dependent on repetition and repeated exposure to similar clinical events. As Benner posits, with repeated practise, the practitioner will become less reliant on the need to refer to guidelines which will enable not only a quicker response to events but will also aid the promotion of flair and innovation in practice. The advantage of team learning has also been demonstrated in other professions. Hodkinson and Hodkinson (2003), describe such learning in a community of practice such as in education. In their study of secondary school teachers, they highlighted the informal learning that took place between the teachers in an arts faculty of a secondary school. The study also made comparisons to how different teachers utilised different modes of learning. For example the more experienced teachers in the arts department made use of learning informally from each other in comparison to newer teachers taking the opportunity to complete more formal training programmes such as IT training. The role of colleagues and other professionals in learning was seen as essential. Clark (2005) also describes how the structure of an organisation will have an impact on learning. Clark suggests that a partnership model is more conducive to learning that that of a dominator structure that is seen in hierarchical organisations.

Whilst the role of the professional educator in learning is acknowledged, other individuals can also provide support and direction in learning and development. A study carried out by Murphy (2000), highlights the benefits of joint delivery of
practical nursing education by experienced nurses and nurse educators. The
study concluded that half of the nurse education curriculum may be delivered by
individuals who have no day to day exposure to clinical practice. Nevertheless,
the need to identify the most appropriate person to deliver education for health
professionals is essential and was identified by the DH paper 'Making a
Difference' (DH 1999) which refers to the advantages of using experienced staff
in the teaching role. It is acknowledged that the learner needs support in the
workplace. The NMC (Nursing and Midwifery Council 2006) has reviewed the
role of mentors, practice teachers and teachers. The NMC gives direction on
how nurses are trained for their role, how often they should be updated and the
individuals they can support. The NMC guidance also suggests that mentors and
practice teachers can only support students who are at the same academic level.
This will mean that mentors are practice teachers will have the appropriate
academic background to support students who have varying academic
requirements.

3.3.5. Summary

The literature reviewed here suggests that there is some confusion over the
definition of nurse competence (section 3.2) and that aspects of adult learning
need to be taken into account in nurse education and include social influences
(section 3.2) The learning process can also be enhanced by the use of
experiential learning which is seen as a key component for practice development
(Benner, 1984). The use of simulation can augment the teaching of practical
skills in a safe environment, but this teaching medium does not offer the nuances
and the elements involved in the delivery of care in the practice setting (section
3.3.2).
3.4. Learning and the needs of the organisation

The culture and nature of a particular profession will also have an impact on how an individual will develop and learn about their professional responsibilities and accountability. Billett (2002) gives some examples of this and whilst his studies do not include the nursing professions, the author believes that his findings do have some relevance. In Billett's study (2002) of apprentice hairdressers, there were distinct differences in the responsibilities and skills that hairdressers were afforded in different salons. For example, those who worked in city centre salons often specialised in specific aspects of coiffeur such as cutting and colouring. In out of town salons, the hairdressers were expected to take on a more generic role covering all aspects of hairdressing. In the case of tailors, they had a similar training development experience starting from cutting and then moving onto the art of sewing. In the case of car mechanics, Billett's (2002) study gives the example of mechanics in rural areas being able to service and repair cars of a variety of makes in comparison to those who worked in specialist workshops in urban areas. Despite the fact that most professional training courses require certain objectives and standards to be met before a qualification is awarded, it is apparent that skills are utilised in different ways dependant on the area the individual practises within. Therefore, it could be argued that a nurse's portfolio of competencies will depend on where they trained and their exposure to specialist clinical experience following registration. The issue regarding generalist and specialist practice and its relevance to military nursing will be discussed later (chapter 5.15).

Whilst an individual may possess the conceptual knowledge necessary to fulfil a particular role which is then tailored and developed from further experience (Benner 1984) and reflection (Kolb 1984, Moon 1999, Illeris 2008). Johns (1995) also highlights the importance of reflection in practice. His model of reflection is based on Carper's fundamental ways of knowing (Carper 1978). However, Johns
(1995) adds a further dimension, that of reflexivity. The value of reflexivity enables the practitioner to adapt and change practice following exposure to an event. Such exposure will be dependent on what is expected of the practitioner. Furthermore, the freedom of the practitioner to adapt and to be innovative in practice will depend on their level of competence (Benner 1984). Novice nurses will not have the skills and experience to adapt and refine skills as opposed to the experienced practitioner who is less reliant on protocols and guidelines (Benner 1984).

The role and responsibilities that are expected of an individual as well as the needs of an organisation will also have an impact on how the individual learns and develops (Illeris 2008). Whilst an organisation may provide the opportunities for an individual to learn and develop, the onus for benefits of such learning opportunities rests with the individual. A motivation to learn is an essential constituent to enable an individual to yield the benefits of any learning experience.

3.5. Motivation to Learn

The individual's motivation to learn is seen as an essential aspect of the success in the adult education (Moon 1999). The motivation to learn may start well before an individual embarks on formal education. Attitudes to learning may be an inbuilt attribute, which is often hidden, but will manifest itself during life. In a grounded study by Kroth and Boverie (2000), ten individuals concluded that a mission for learning is present throughout life but it may be hidden. Life experiences may trigger such a mission and encourage an individual to learn. The study also suggested that the stronger the life mission for learning, the greater the individual's determination to learn would be. Therefore, the success of learning in life may be inbuilt in a person's personal characteristics. Indeed Quinn (2000) suggests that human learning is a lifelong activity. Social and life
events will also have an effect on the individual's ability and opportunities to learn and plans for learning may change in response to life events. For example, a study by Bloomer and Hodkinson (2000), followed 42 students from year 11 for three subsequent years. The results showed that initial learning intentions changed and were indeed affected by personal circumstances. Levison's (1986) work on transitions during adulthood that were described earlier, may impact on motivation to learn at different stages of life.

3.6. The nurse's requirement to learn

Emphasis is now placed on the need for all nurses to continue learning throughout their careers (Nursing and Midwifery Council 2008d). The registered nurse has to comply with standards for continuing professional development and practice standards set by the Nursing and Midwifery Council (Nursing and Midwifery Council, 2008) to be able to be registered as a nurse, midwife or health visitor. The NMC Code (2008) states that nurses must practice within their own competence and acknowledge the boundaries of their practice.

The NMC also highlights the need for lifelong learning (Nursing and Midwifery Council 2001), and given the requirement for healthcare organisations to abide by the principles of Clinical Governance (CG), lifelong learning is essential for good practice. Indeed, one important aspect of CG is the need for practice to be evidence based. Therefore, the concept of lifelong learning for nurses to ensure that practise is evidence based is congruent with the requirements of CG. Whilst the need for evidence based practice is an essential component of CG, a study carried out by Upton (1999) explored how nurses and health visitors used research and implemented evidence-based practice. The results of the study highlighted the lack of knowledge regarding how to use evidence based practice in their area of work. However, the majority acknowledged that evidence based
practice should be an integral part of their work. The participants in this study suggest that they reviewed their ways of working following networking and discussing care with colleagues. There were also barriers highlighted in the application of evidence-based practice which included not being able to access the internet to find research articles and lack of time to implement evidence-based practice if the practitioners wanted to use research findings. However, it is interesting to note that the cohort included in the study were mainly practitioners who qualified in the 1980s and 1990s. It may be that those practitioners did not receive training in research, where to find it and how to implement and critique findings. This was not an area that was explored in training at that time.

It is evident that whilst lifelong learning is supported by the NMC (Nursing and Midwifery Council 2001), the variation in nurses employing research skills and promoting evidence-based practice is clearly apparent. Whether this is a result of the different academic status of nurses within the profession is not clear. The intended move to a all graduate-based nursing profession (Department of Health 2008, Nursing and Midwifery Council 2010b) may help resolve this concern.

The increase in the number of patients who require specialist intervention has also increased and such demands will have an impact on the opportunities for nurses to access professional development and learning activities. Hallin and Danielson (2007) in their study found that whilst learning was seen as a necessity, which included the sharing of best practice with others, the reality was that nurses felt that they had little influence over changes to practice.

The registered nurse will have had to complete training articulated by the NMC Standards of Proficiency for pre-registration nursing education (Nursing and Midwifery Council 2004b). The document sets out in detail standards that must be met to ensure that nurses achieve standards so that they are fit to practise as
a registered nurse. The document covers areas such as criteria for admission for training to the standards of education to facilitate registration. The NMC states that:

'The primary purpose of pre-registration nursing programmes is to ensure that students are prepared to practise safely and effectively to such an extent that the protection of the public is assured'

(Nursing and Midwifery Council 2004b: 13)

To this end the NMC directs the areas of practice to which student nurses are exposed to, to ensure that they are prepared for registration. For adult nursing, the NMC instructs that the practitioner is exposed to appropriate areas of practice so as to ensure that they are acquainted with the needs of the patient and that clinical placements are in place to make certain that as such the '...skills and knowledge are transferable' (Nursing and Midwifery Council 2004b:23).

The NMC commissioned a review of fitness to practice in 2005 following concerns about the '...competence of some newly qualified registrants' (Nursing and Midwifery Council 2005:1). The review looked at not only the policy of the NMC but also that of other healthcare practitioner registration bodies both in the UK and abroad. The report suggested that there was no concrete evidence to support the theory that nurses in the UK were not fit to practice at the point of registration. Such evidence from complaints to both the employer and the NMC were sporadic in nature. However, the report indicated that there was no common integrated method of capturing such data if it did exist.

The Royal College of Nursing (RCN) has published guidelines on a core career and competency framework to define a newly qualified nurse as the competent nurse (RCN 2007). They suggest that the nurse will develop, with experience, from an experienced nurse to senior practitioner with the Consultant Nurse being
at the top of the competency framework.

3.7. The developing professional

A study by the University of Brighton and Sussex was commissioned in 2004 (Eraut et al. 2004) to explore how engineers, nurses and accountants develop after initial training. Common findings across the groups of professionals were that mentoring was felt to be an important factor in professional development in following graduation. However, the types of mentoring programmes varied and often lost their value in some professions. Of note, some benefits included nurses who felt that competency booklets were useful (Eraut et al. 2004). All groups welcomed constructive criticism and the participants stated that this led to a growth in confidence. The worth of a role model was described in the nursing and engineering groups. Nurses, in particular, reported that there were issues with delegation and prioritisation in the first four to six months following qualification. A study by Gerrish (2000), found that nurses qualifying in 1998 as opposed to 1985 felt that the transition from student to staff nurse was easier. This study followed up newly qualified nurses following cohorts of training in 1985 and 1998. Various aspects of the staff nurse's role were explored such as induction, support following qualification, management skills, administration of medicines and other core responsibilities. Gerrish (2000) suggested that this may be due to newly qualified nurses being expected to look after a group of patients rather than being expected to manage a ward, which was expected by the more experienced staff nurses.
3.8. Military Nursing

Military Nursing has a long history with notable key professionals such as Florence Nightingale being involved in the care of military patients. The recognition that nurses are an essential aspect of medical support in war and conflict is well articulated (Tyrer 2009). However, it took drive and determination for military nurses to be afforded rank to bring them in line with other professional colleagues in the military services, notably doctors. Military nursing has a long history, but a detailed history is outside of the remit of this thesis. Nevertheless, it is important to refer to recent military nursing history as changes in the way that military nurses are now employed and how these changes have had an effect on the current ethos of the military nursing is relevant.

A significant change to how medical officers, nurses and other medical practitioners worked was made in the 1990s. This was in response to a change in the perceived threat to the countries in the West, particularly the USA and UK. A study (Defence Cost Study 15) included a review of the costs of the military medical services. The report also recommended changes to the required skills and experience of medical personnel to reflect the changing role of the UK Armed Services.

Prior to 1995 military nurses worked predominantly in military establishments such as military medical centres and military hospitals. Military hospitals were resourced by either the Royal Navy, Army or Royal Air Force personnel or a mix from all three Services. Nurse entry into the military service was either by direct entry following training in the NHS or by completion of training in military nurse training schools. All military nurses, at some time in their career, would be expected to work in a military hospital. In the 1990s two major events changed the military medical services. Firstly, the "Cold War" which had seen the gradual
military build up by the West in response to perceived threats by the Soviet Union was coming to an end. The subsequent need to reduce the number of military personnel also saw a reduction in the supporting elements of the Services which included the military medical services (Campbell 2007 [online]). Secondly, the Defence Cost Study 15 (Defence Committee (HCDC) 1995, Defence Committee) led to a significant change to secondary health care provision. This included the closure of military hospitals in UK and in Germany. However, military hospitals still exist in Cyprus and Gibraltar. These hospitals remain as it is felt that the healthcare service in those countries do not meet the medical service delivery requirements that would be expected in the UK National Health Service (NHS).

In addition to the closure of military hospitals and the necessity to save £500 million over ten years, the Defence Cost Study 15 had two main aims, these were:

- To provide a medical services that was in line with "best practice" provided by the NHS.
- The size of the defence medical services should reflect the demands of operational deployments

(MoD, 1996)

Unfortunately, the full document and underpinning research that led to DCS 15 is not in the public domain and the research to support the rationale to change the DMS is not available. However, from a broad perspective it was felt that the military hospitals did not provide the full range of medical services that a large NHS hospital would provide. The manpower recommendations led to a shrinkage of the military medical services with redundancies imposed to reduce manpower. It was decided that the responsibility for primary care should remain with the
single services. However, the management of secondary care would be the responsibility of a tri-Service agency.

Another recommendation was to close military hospitals in the UK and move secondary care into what was known as Ministry of Defence Hospital Units (MDHU), which would be embedded within NHS hospital Trusts. These units vary in size and structure, but usually include a military led ward with the rest of the military medical personnel working in other departments within the hospital. These departments include areas such as intensive care, theatres, emergency departments and acute medical admissions departments. It is thought that these specialities were chosen as they would expose the practitioner to acute care which would be more relevant to the role of military medical personnel in times of conflict. MDHUs are currently located in Birmingham, Northallerton, Peterborough, Frimley Park, Portsmouth and Derriford. All of the MDHUs have a military headquarters embedded within the host NHS Trust.

The current agreement between the Department of Health and the Ministry of Defence details the responsibilities of hosts trusts for patient care and the use of military staff (Department of Health 2005). The document states that:

'[DMS personnel]..contribute to the NHS clinical capacity and enable DMS personnel to maintain their clinical expertise whilst maintaining their military skills and ability to deploy quickly to areas of conflict in support of frontline forces'

(Department of Health 2005: 1)

The agreement endorses the need to employ DMS personnel in areas that will ensure clinical competency for their military operational role and maintain and
enhance their clinical skills' (Department of Health 2005: 1). However, there is no current definition on what military nursing clinical competency is and its requirement for the support of military operations. Therefore, the skills required to care for clients during times of conflict, or indeed being able to foster the abilities to be able to transfer nursing practise skills from a peace-time environment to that of deployed operations, is not clearly recognised. However, senior military nurses employed at the MDHUs have acknowledged the need to develop newly qualified military staff-nurses, who have undergone their training in an NHS environment. Such acknowledgement ensures that post-registration experience is not restricted to one area of nursing and that such experience is relevant to the operational role of the military nurse. Locally agreed rotation programmes have been put into place to address this issue. Nurses are usually placed in areas such as acute medicine, surgery and accident and emergency. The contracts that are agreed between the NHS and the MoD, includes an agreed amount of protected time allocated to military medical personnel to allow for military training.

3.8.1. The registered nurse in the Defence Nursing Services

There are three main routes of entry into the Defence Nursing Services (DNS); the military student nurse programme, direct entry Staff Nurse and direct entry Nursing Officer. The terms and conditions of service along with promotion opportunities are broadly the same across the three services but the RAF terms of services will be used in this paper.

3.8.2. The military student nurse

Following recruitment, pre-registration training is completed at the University of Central England. Despite wearing Navy, Army or RAF uniforms, the military student nurse completes training in tri-Service cohorts.
As with civilian nurse training, military nurse training has moved into higher education establishments, but the effect on military ethos has yet to be quantified. However, there are subtle differences in how military student nurses are managed in comparison to their civilian colleagues. Firstly, the main difference between military nurse student training and standard nurse training is that military student nurses receive a salary and they are required to undertake military training in addition to nurse training. However, they still follow the curriculum set by the universities for registered nurse training. Secondly, on qualification, the newly qualified staff nurse is given recognition by the award of the rank of corporal. This rank is recognised by other members of the UK military services and indicates that the individual will have some supervisory and leadership responsibility. However, for the newly qualified military nurse it adds an additional burden of not just having to cope with new nursing responsibilities but also being credible in the military services.

3.8.3. Direct entry staff nurse and nursing officer

Registered nurses joining the Defence Nursing Services following registration can enter as a staff nurse or nursing officer. Staff nurses enter as corporals and usually have limited post-registration experience. Having entered the Service, the staff nurse can go through the ranks to the highest non-commissioned rank of Warrant Officer. The staff nurse can also consider whether or not they want to apply for a commission as a nursing officer. Such an aspiration has to be supported by a recommendation from their line manager. Following a positive recommendation the individual will embark on the recruitment process again to move into commissioned service. The nursing officer is given a military commission in recognition of nursing experience and usually a second qualification. Again, nursing officers can be awarded promotion and can aspire to
reach the highest ranks of the Defence Nursing Services. Both nursing officers and non-commissioned ranks attend basic military training on entry to the service, which is commensurate with their route of entry. Collective tri-Service medical and military training takes place where appropriate. Initial military medical courses give an insight into working in the Defence Medical Services but are not specific to any role such as nursing. Normally, registered nurses will be employed in secondary care unless their specialist qualification can be utilised such as in primary care nursing.

As discussed earlier, military nurses working in secondary care are firmly embedded within the NHS Trusts. The focus is to ensure that they are sufficiently prepared to fulfil their operational roles in times of conflict such as the Iraq war and in support of the recent deployment of troops into Afghanistan and other areas.

3.8.4. Career development

Promotion is dependent on performance that is assessed on a yearly basis. The Armed Forces prides itself on giving mid-year and annual appraisals to all personnel. In 1998 it was decided that there should be harmonisation of the personnel reporting systems across the three services. It was decided to implement a joint appraisal for officers in the first instance. This reporting system is known as the Officers' Joint Appraisal Report (OJAR). This reporting system has been developed further and is used for all ranks. However, the reporting system is generic and assesses the personal skills and qualities of the individual and is used for all trades and professions within the Armed Services. Only a small part of the annual appraisal describes the professional attributes of the individual. The focus for assessment is on generic military skills such as leadership, management and communication. For military nurses, there is no
direct comparison with the NHS Knowledge and Skills Framework or Agenda for Change. However, the Armed Forces Pay Review Body (AFPRB) does compare the pay of military nurses and their NHS colleagues. To encourage the recruitment of specialist nurses, the military services offer a monetary recruitment bonus. Also, 2009 has seen the introduction of a military nurse's pay spine for all military nurses with specialist nurses attracting additional pay. This means that nurses will be paid more than those of the same military rank who serve on general duties within the military services.

3.9. **Going on Deployment**

The number of Defence Medical Service personnel that are currently deployed in Afghanistan is over 400 (Ministry of Defence 2010b[online]). These numbers constantly change in response to requirements. Nurses have always worked in support of military operations and some have written about their experiences. Indeed, most of the literature comprises of personal accounts. There is a dearth of literature that embraces any underpinning research. The literature search did identify some articles from American War veterans, but articles relating to UK nurses working in support of war were sparse. Stanton et al (1996) carried out a phenomenological study of nurses who had served in Vietnam, World War 2 and Operation Dessert Storm. Twenty-eight individuals participated in the study, five of whom were men. The studies identified themes that included how the individual reacted personally to the adverse and unusual circumstances of military operations and the issues around being a military nurse, and living and working with other military personnel. Participants identified fatigue and mental stress, fear and sadness as personal reactions to such living and working conditions. Nevertheless, primitive living conditions and confusing travel arrangements were accepted as part of living with the military. Issues around being combatant as opposed to non-combatant as a nurse and dealing with
complex cases were seen as challenging experiences and camaraderie was cited as a positive feature of military nursing which helped them cope with these experiences. Camaraderie was also cited as a theme highlighted by Mackie (2001) and Tyrer (2009). Participants also described how their sensory experiences, such as sight and smell, reminded them of their experiences when they returned home. Individuals talked about how they adjusted to the nuances of nursing in support of military operations by accepting reduced responsibilities in personal management and control but by the use of innovation and humour they were able to address the issues of being on deployment.

Foley (2000) in a phenomenological study of 24 nurses who were deployed in support of the first military operation in Bosnia, highlighted the lack of knowledge regarding the uniqueness of military nursing as opposed to general nursing which included issues such as exposure to danger for the participants and their patients which was seen as a negative aspect of military nursing. The participants in this study referred to the adverse weather conditions and primitive sanitation and water supplies that they had to cope with. The study also described how the nurses in deployment roles adopted a proactive advocacy on the patient's behalf. This included being there for the patient and being the patient's voice with regard to the treatment by physicians who were often perceived as seeing the patient as an object rather than an individual. In addition, the study refers to other issues such as having to use Individual Protective Equipment (IPE), which includes respirators and protective oversuits, that had to be worn during their deployment, which are not worn in peacetime. This type of protective clothing is cumbersome and restricts ease of movement. This sentiment was described by nurses who have deployed on operations throughout history. The nurses accounts in Tyrer's (2009) work raise the issue of wearing protective clothing and its impracticality. Nurses in earlier conflicts describe how impractical it was for them to wear
nursing uniform on deployment before they were allowed to wear combat clothing.

There are also issues for nurses, other than military nurses, who practise in areas of conflict. Wallis (2001), in her narrative of the experience of being a nurse in Sierra Leone refers to issues that will not normally affect a nurse practising in peacetime. She mentions her fear of being captured and the unpredictability of the rebels on a daily basis. These fears that were unique to her situation replaced the tensions that she would have normally felt in her day to day practise in an intensive care unit in peacetime. Whilst the nurse clearly has to adapt to conquer personal challenges, the care of patients is clearly the focus for all nurses. Even in conflict nurses strive to care for the patients no matter what injuries they sustain. American Nurses in World War II describe the horrific injuries that they had seen and had to deal with (Scannell-Desch 2005). However, it was recognised that nurses required additional training to meet the demands of these unique set of patients and to equip nurses to practise in these environments. The importance of the relevant training prior to working in alien and hostile environments has also been highlighted by other workers. For example the need to utilise different skills for different roles was identified by Raymond-McKay and MacLachlan (2000). In their study of 15 nurses who had been deployed in emergency relief work, examined personal narratives that were written by nurses. The narratives included one positive and one negative account. The study indentified that some skills were highlighted more than once in the narratives. Such skills were seen as important for the practitioner in both the positive and negative incidents. These included coping strategies such as having a sense of humour and being able to relax. Other issues included homesickness, rejection of care, being able to express emotions and not been trained for a particular role.
In another study involving 36 nurses who were involved in Operation Desert Storm by Dahl and O'Neal (1993), identified themes such as a lack of faith in the command and control, lack of organisation and a lack of communication from leaders and managers, complaining by colleagues and uncertainty. Nurses in this study referred to coping strategies such as exercise, laughter and the development of coping skills to minimise the effects of these problems. Such coping strategies were described in accounts recorded by Mackie (2001) and Tyrer (2009).

Coping with the severely wounded is a recurring theme in the literature, (Stanton et al. 1996, Biederman et al. 2001, Wallis 2001, Tyrer 2009). Biederman et al (2001), in their study of Australian nursing sisters who served in Vietnam, highlighted the lack of training prior to their deployment. Whilst one of the participants referred to the usefulness of her accident and emergency experience on deployment, others referred to their lack of training to undertake roles such as triage without the support of a specialist team, which would have be the expected norm in a peacetime hospital. One nurse described having to intubate patients despite having not undertaken this procedure before. However, she felt that she had to in these situations in the interest of the patient and given the fact that there was no one else to do it. This theme was supported by the recollections of British Army Nurses (Tyrer 2009) where description of nurses having to undertake procedures that normally rest in the domain of the doctor. One nurse describes having to undertake lumbar punctures, a procedure that she had never been trained for, but she had to do this due to the lack of medical officers. A phenomenological study carried out by Scannell-Desch (2005) involved former and current serving nurses who had served in Vietnam. The study identified seven themes relating to personal experiences following the interpretation of the data. The themes included keeping a diary, advice and guidance regarding...
training and caring for yourself, the identification of support systems and the usefulness about talking about your experiences. These findings are supported by other authors such as Tyrer (2009) and Mackie (2001) where the accounts given by military nurses describe how nurses talked about the importance of looking professional, wearing of make-up and the sharing of experiences.

The recognition of the emotional aspects of deployment are an essential element in both preparation for deployment and effective debriefing following a deployment experience. Campion et al. (2006) suggest that the low incidence of psychological issues following deployment to Afghanistan is related to training and morale. Nevertheless, steps are in place to ensure that nurses and other military personnel are afforded professional help when they return home. There is a need for nurses to share their experiences when returning from deployment with those who can show true empathy for those who have been away. Following a deployment to Bosnia, the author found it difficult to discuss experiences with those who had not been deployed. Life had continued whilst the author was away from home, and family had adapted to manage during the period of deployment. Others will also learn by sharing and reading nurses experiences (Scannell-Desch 2005). It is essential that military personnel are afforded an opportunity to discuss and share their experiences once they have returned from deployment. This need is recognised by all three services. For example, in the RAF, medical personnel who return from deployment are recalled for a day to discuss their experiences. They are also given access to other professional staffs such as chaplains and community psychiatric nurses. Robbins (1999) describes the lack of research regarding the repeated exposure to trauma and suggests that whilst debriefing may be useful it should be incorporated into supervision.
Whilst clinical experience gained in the NHS is a necessity prior to deployment, the clinical demands of military nursing on deployment are often unique and not often seen in peacetime such as dealing with burns blast injuries and multiple traumatic amputations. These roles are often new experiences for military nurses identified in a grounded theory study carried out by Griffiths and Jasper (2007). Their study involved military nurses from all three UK military nursing services who had been in a conflict zone in the last ten years, and explored the new roles that nurses encountered. The study identified such changes as military nurses now having to operate in numerous conflicts ranging from being involved with supporting humanitarian aid and providing nursing support in armed conflicts such as Iraq and Afghanistan. The findings also highlight the dilemmas that military nurses often face with regard to the military versus their nursing role and the ethical issues that can arise. An example of this is the caring for injured children and families of the host nation or enemy. However, the situations that nurses encounter during their deployment are of value in broadening their skills and developing a robust portfolio of practice experience for future deployments. Philpott (2007), in his article describing his personal experience of deployment, describes the value and uniqueness of the experience that he gained. He also highlighted the dual role of the nurse, military versus nursing which was also described by Griffiths and Jasper (2008).

The nature of the military nurse's additional role and responsibilities was highlighted in an article by Snow (2007) and the rich learning opportunities have been highlighted by Philpott (2007). The need to be able to cope with wearing body armour and responding to attacks were described. However, the benefits of the clinical experience were also cited (Philpott 2007). Camaraderie and team work were again described as essential aspects of working in such hostile environments. Hagstad (2005), an American military nurse, reinforces the
concept that the experience of going to Iraq was beneficial. Indeed he felt the need to go to Iraq to support operations. Whilst the experiences are unique on deployment, nurses also have to accept having to manage horrific injuries such as severe head injuries, amputations and multiple injuries that occur frequently on deployments in Iraq and Afghanistan. Harrison (2005), suggests treating such patients with catastrophic injuries are not the same as dealing with patients in emergency departments back home.

Blurring of roles may be more evident in times of conflict and war and the use of military rank may also cause issues with professional collegiality. Lamb (2006) refers to this in her article which describes the work of the RAF Critical Care Air Support Teams. Rank does not always reflect the clinical experience of the individual. For example a nurse may have been in the armed services for a period of time and have been promoted. The nurse may then decide to embark on further training such as emergency or intensive care nursing. Therefore, the practitioner may hold a rank in recognition of their military service, but may have little experience in their new discipline of nursing. In essence the nurse would be practicing at different levels of competence (Benner 1984), which would not be reflected by the rank worn. Also, medical officers are on a different terms of service than that of nurses and will be eligible for promotion earlier, thus adding confusion regarding rank versus experience. The military rank denotes military leadership and management seniority of the individual and may not be a true reflection of an individual's clinical experience. This may be an issue if the subordinate is the more experienced individual in a team. The issue of teamwork then takes priority to ensure that there is an effective clinical outcome for the patient. In essence recognition should be given to experience not just rank. This is often the case in aeromedical nursing where the nurse is experienced in caring
for patients in flight but a medical officer is on the aircraft to facilitate medical intervention if necessary. Yet the medical officer, albeit senior, will not act as the team leader on the flight. Despite the dynamics of the military medical teams, their need to carry out roles often out of their competence zone, may be down to the human instinct to help and most individuals will react positively when another individual needs assistance. This has already been referred to earlier when military nurses have reported that they had to carry out procedures that are normally in the domain of the doctor. Studies have been carried out to explore how non-professional individuals react to such situations. It may be a human trait that makes and individual help. This is seen in 'Good Samaritan' acts where an individual may go and help someone who requires assistance. However, there may be factors that may affect their actions. For example, in a study by Piliavin and Rodin (1969) incidents were staged on an American underground system to observe how the general public reacted. The actors would collapse on the train and observers would watch for the response. In 62 out of 65 events, the victim received help before the observer intervened. The actors also played the part of a blind and drunken person. The victim with the cane received spontaneous help whereas the drunk received less spontaneous help. It may have been that the helpers perceived the drunkard as being a threat, but this was not discussed in the study. It was suggested that more than one individual normally responded to the event. This study took place some time ago, but it gives an indication on how an individual may act in a helping situation. The reaction to the drunken individual may reflect our social values and will have an effect on how we intervene in a particular situation. Thorson, (2002) explored how social values would affect the decision making of an individual or team. The study revolved around a hypothetical lifeboat. As there was one too many passengers in the boat, the group had to decide who should stay in the boat and who should be asked to leave. The occupation and social circumstances of the individuals who were in
the boat were available for the group to make a decision on who should leave. Their profiles included a nurse, a 22 year old 'drop out' and a pregnant 18 year old. The decisions made suggested that it was unlikely that the nurse would be voted out and that the older individual would be expected to be asked to leave the boat. The study also related this to battlefield triage where the medical staff have to decide who will receive care. More effort is afforded to those who are expected to live which are comparable to the findings of the lifeboat project where age is seen as a reason why an individual should be expected to live. So despite training and issues of competence, human instinct will normally dictate how an individual will react to a situation. In the accounts of military nurses described by Tyrer, (2009) yet another dimension was highlighted which was the care of prisoners of war (POW). Whilst it is directed by the Geneva Convention (ICRC 1997) that all parties wounded in war/conflict should be treated with respect and afforded appropriate medical care may not be easy for the practitioner to accept. However, the accounts of nurses during the second World War described how German prisoners were denied penicillin as this new drug was kept for the Allies. Some nurses found it hard to accept that German POWs were afforded good quality care considering the heinous acts that they committed (Tyrer 2009). London et al (2006) describe the additional ethical dilemmas that health professionals may encounter in war and conflict. As well as professional codes of ethics, the practitioner has to grapple with ethical dilemmas that may arise due to military command and control. For example, commanders may try and overrule decisions made by medical personnel.

As already discussed, the research available regarding nursing on deployed operations is somewhat limited with the majority of studies being undertaking being based on experiences following World War Two and the Vietnam War. Accounts focus on personal experience rather than research focused (Griffiths &
Jasper 2007). Nevertheless, such recollections are comparable with the experiences of nurses who have been deployed recently. Following the conflict in the Balkans and the continued deployment of nurses to Iraq and Afghanistan, the research base is beginning to grow but the majority of literature regarding military nursing in current operations still centres on personal experience which was a conclusion following the literature search for this study. Nevertheless, studies regarding the advances of medical care for patients who have suffered trauma in these conflicts are readily available but are not relevant to this study.

3.10. Conclusion

To maintain registration, the nurse has to comply with the requirements of the NMC (Nursing and Midwifery Council 2008d). These requirements direct that the nurse completes periods of practice time as well as CPD. Taking this into account, acknowledgement needs to be made of the differing needs of the nurse whether it be in the pre or post-registration period. The literature has identified that adults learn in different ways and other aspects including motivation to learn has an effect on the success of the learning outcomes for students. The use of workplace and experiential learning has its place in learning, but it needs to have direction and support to realise the full benefits. Following on from a learning period, the development of the individual will be dependent on where they are employed and the needs of the employer. Findings in the literature highlight the need for support and feedback for any professional. The need for flexible realistic teaching goals will reap benefits in the long term for both the practitioner and the employer.

With regard to military nurses, literature pertaining to how learning theories apply to the development of the military nurse is sparse. The literature available tends to describe personal experiences. However, the majority of findings do refer to
the lack of preparation and training to prepare military nurses for their role. However, military nurses also highlight the rich learning opportunities that are afforded on deployment. How military nurses can rise to being an expert military nurse is not articulated. Every deployment will be different and consolidation of new skills could be an issue. In addition, nurses have to deal with working in a unique and often hostile environment which is in complete contrast to their peacetime role. Military nurses have the dual role of being a nurse and a member of the military services which can be an issue especially when caring for prisoners of war. Rank in the military nursing service is important, but does not always reflect the competence of the individual but may be of concern when the military expect the individual operate in accordance with their rank.

In essence there is a dearth of research regarding the competence to practice of military nurses who go on deployment. Such research is essential to ensure that military nurses have the requisite skills to operate in these challenging roles that are not duplicated in their peacetime practice.
Chapter Four
Methodology

4.1. Introduction

This chapter will discuss the rationale for choosing a grounded theory approach for this study including the study's construction and design. The use of triangulation will be discussed.

Part one of this study used a quantitative approach to collect initial data. The survey required the participant to fill in biographical data and answer questions about their preparedness to undertake tasks and roles on deployment. Text boxes were included in the questionnaire to allow participants to note what tasks and roles that they were required to undertake on deployment but for which they had received no training.

For the second part of the study it was decided to use a qualitative approach in order to build on the data collected in part one of the study and also to gain a deeper understanding of competence issues that military nurses encountered on deployed operations. It was indicative from the data obtained from part one of the research study that military nurses were not fully prepared to undertake some roles expected of them on deployment; such roles included both nursing and military skills. For example, military nurses taking part in the study described how they lacked some skills such as venepuncture and cannulation and did not have the underpinning knowledge to care for certain groups of patients such as paediatrics and burns. As military nurses, they were also expected to carry out military duties such as leading teams responsible for the security of the medical facility. Whilst the survey clearly indicated that there were competence issues, the respondents were not able to give comprehensive information about such issues.
It was decided to use triangulation with quantitative and qualitative data collected, a grounded theory approach was used to analyse the findings in both parts of the study.

4.2. **Triangulation**

The qualitative part of the study would enable the researcher to explore the deeper meanings that the respondents had alluded to in the first part of the study but also to give depth to the research findings as a whole. Bryman (2008) and (Strauss & Corbin 1990) suggest that triangulation may enhance the understanding of a phenomenon, but warns that there may be conflicting results obtained which will ultimately have an impact on the results of a study. In essence, the researcher may not be able to guarantee that the findings from one part of the study will complement, complete or confirm the findings of a different research method that is used in the same study. Jones and Bugge (2006) suggest that triangulation adds completeness to a research study as the use of multiple data collection methods may add or indeed provide missing data for subsequent data analysis. Foss and Ellefesen (2002) propose that triangulation, used with the intention of completeness and confirmation of data, is ‘true’ triangulation. When triangulation is used to complement research findings, Foss and Ellefesen argue that this may imply that the researcher ranks one of the research methodologies of importance than the other.

The advantages of triangulation in research studies is highlighted by Arksey and Knight (1999) as follows:

- Can increase confidence in results.
- Can strengthen completeness of a study.
- Can address different but complementary questions within a single study.
- Enhances interpretability: one set of data gives an understanding to another set.

- Divergences can uncover new issues or processes that can result in turn in the development of new theories, or the modification of existing ones.

- The researcher is close to the research situation, contributing to a more nuanced understanding of the focus of the study.

(Arksy & Knight 1999: 25)

The advantages of triangulation highlighted by Arksey and Knight (1999) were relevant to this study. Essentially, the lack of space for the respondent to articulate their views on the questionnaire was acknowledged and the subsequent use of a qualitative method was deemed appropriate to allow the researcher to explore issues in more depth. The use of the both quantitative and qualitative data in this study is commensurate with a grounded theory approach as it is accepted that other forms of data can be used in the research process (Corbin & Strauss 2008).

4.3. The choice of research methodology for the study

The choice of a research methodology for data collection and analysis may be influenced by the researcher’s personal bias or familiarity with a specific methodology or approach. Indeed, this was the case for this study as the researcher had used phenomenology in a previous study and felt comfortable with its use and application. However, it was decided to explore other methodologies to confirm that the chosen methodology was appropriate for this study.

It was acknowledged that in choosing a research approach, the theoretical underpinnings of such an approach would need to address the details of the
research question (Polit & Hungler 1995). The quantitative design of the first part of the study not only provided data that could be used in the second part of the study, but it was intended that the results would confirm that further study was realistic and meaningful. This approach is accepted as an essential credential in research approaches such as grounded theory (McCann & Clark 2003). In addition, the results of the first part of the study enabled the researcher to identify participants who met the objectives of the second part of the study which was that they had been on deployment in Iraq or Afghanistan or both, and that they were willing to be interviewed.

The approaches considered for this study included ethnography and phenomenology. However, grounded theory was selected and will now be discussed.

4.4. Grounded Theory

Glaser and Strauss introduced grounded theory as a qualitative research approach in the late 1960s with their first book The discovery of grounded theory: strategies for qualitative research (Glaser & Strauss 1967). Glaser and Strauss introduced grounded theory as they suggested that there was still a disconnect between theory and empirical research in both quantitative and qualitative research approaches. This disconnect was identified by the lack of the generation of theory as research approaches were aimed at testing hypotheses and verifying theory (Glaser & Strauss 1967).

Grounded theory seeks to explore experiences, processes and social structures to generate theory (Polit & Hungler 1995). Bryman (2008) defines Grounded Theory as ‘An approach to the analysis of qualitative data that aims to generate theory out of research data by achieving a close fit between the two’ (Bryman 2008: 694). Whilst Glaser and Strauss were the founders of grounded theory
their concepts did change over time. For example, Strauss introduced the concept of a paradigm model where codes that were identified in the open coding process are brought back together to form initial categories. This process was refuted by Glaser as forcing the data and he articulated his dismissal of this process (Glaser 1992).

Grounded theory asserts that a literature search is carried out after data analysis to enable comparison of newly generated theories with theories that are already held (Walls et al. 2010). However, it could be argued that a literature search carried out before will confirm gaps in knowledge and will support the proposal for the research study taking place. This is referred to as fittingness (Chiovitti & Piran 2003). Moreover, a literature review may be required to gain funding and ethical approval for a study (Moore 2010) as discussed in chapter 3. Strauss and Corbin (1990) suggest that whilst carrying out a literature review at the start of a study may affect the bias of the researcher, it is accepted that the researcher will already have an interest and knowledge about the subject area that they are investigating.

Crabtree and Miller (1992), suggest that the grounded theory method is useful in exploring complex issues and can be used to determine areas for change. Furthermore, they suggest that this method takes into account the researcher's own beliefs and experiences.

At what point data should be collected is not clear. Moore (2010) highlights the lack of direction regarding the formulation of the research question and suggested starting point for data collection. Glaser and Strauss (1967) direct that initial data collection should be in response to a problem or subject area that is identified by the researcher. The data collection usually starts with the selection of suitable participants for the study. Interviews and other methods such as
group work and observation are common ways to collect data (Glaser & Strauss 1967). In this study both questionnaire and interviews were used as a vehicle for data collection. The process of analysis in grounded theory used in this study were as follows:

- Data analysis following analysis and questionnaire and pilot interview led to identification of emerging categories and led to purposeful sampling which is congruent with grounded theory (Glaser & Strauss 1967).
- Once concepts began to emerge following constant comparison collection of data is tailored to its relevance to the emerging categories and theory (Strauss & Corbin 1990). This stage is known as theoretical sampling.
- Constant comparison continues with all the data the collected.

The theory underpinning grounded theory is a mix of symbolic interactionism, a qualitative research tradition supported by Strauss and also associated with quantitative research approaches supported by Glaser (Dey 1999).

4.5. Symbolic Interactionism

Symbolic interactionism is the about meanings that people associate with events. Blumer (1969) describes elements of symbolic interactionism which include how an individual acts on events according to the meanings that they attach to them. The development of such meanings is dependent on their social interaction with others. Interpretive processes will model the way an individual will react and act to a particular event. Charmaz (2008) defines social interactionism as:

'...[a] perspective that focuses on dynamic relationships between meaning and action, it addresses the active processes through which people create and mediate meanings. Meanings arise out
of actions, and in turn influence actions. This perspective assumes that individuals are active, creative and reflective and that social life consists of these processes.'

(Charmaz 2008: 189)

Giddens (2009) suggest that the key aspect of symbolic interactionism is the symbol itself, which can include non verbal and verbal communication. Gidden cites Mead's (1863-1931) argument that individuals use symbols in all interaction with each other which enables them to interpret the actions of others. Such interaction is the basis for the creation of societal influences.

Symbolic interactionism is pertinent to the military services that use symbols in their interactions with others. Moreover, the use of rank, which will be discussed later, is a symbol that identifies and gives credibility to an individual in the military services. Military nurses have the dual role of nurse and Servicemen (Griffiths & Jasper 2007) and therefore have to interact on two levels that of being a nurse and a serving member of the military services. Symbolic interactionism in the military services contributes to military ethos but can cause interprofessional issues when there is a conflict between rank and experience. Such issues will be discussed later in this study. In addition, nurses on deployment will be expected to be able to carry out their operational role. This ability will be dependent on their interaction with similar circumstances in the past and also the support and demands of other individuals in the team.

Whilst the author suggests that symbolic interactionism is worthy of note in this study, Glaser (Glaser 2005) advised that the researcher should not concentrate on one theoretical perspective when using grounded theory as it may be restrictive in the identification of emergent theoretical codes (Walls et al. 2010).
4.6. Data analysis

As this study comprised of both quantitative and qualitative approaches, the specific details of the data collection methods will be discussed in chapters five and six respectively.

Consideration was given to both Glaser's and Corbin and Strauss's articulation of grounded theory. It was decided to utilise the process identified by Strauss and Corbin (Strauss & Corbin 1990, Corbin & Strauss 2008). Given that the researcher had not previously used grounded theory, it was felt that Strauss and Corbin's work provided a more prescriptive and directional approach of using this methodology. Strauss and Corbin (1990) suggest that the researcher will become proficient in the execution of grounded theory if their recommended stages of data analysis are followed which in turn will generate theory. However, Corbin and Strauss suggest that it is accepted that there will be an amount of flexibility in the process to accommodate the differing aspects of the phenomena that are being explored.

Following data collection, the process of analysis begins. Open coding, axial coding and selective coding takes place with memo writing being an integral part of the process.

4.6.1. Open Coding

The first stage of data analysis in grounded theory is open coding. Open coding aims to explore and comparing the data for similarities and differences (Strauss & Corbin 1990). Following the transcription of the interviews, the transcripts are read and concepts are identified. This is done by asking questions of the data such as, what is happening in the situation and then giving the data a label. This process will result in numerous conceptual labels being applied to a given scenario in the data. The labels are grouped into categories to make the data
easier to work with. However, it is acknowledged that such categories may change when more data is analysed (Strauss & Corbin 1990).

Different practices are an accepted part of the open coding process. The interview transcript may be coded line by line (Charmaz 2008) which is a very detailed process of coding. Strauss and Corbin (1990) refer to coding by sentences, paragraphs or even documents. Coding of documents enables the researcher to compare and contrast whole documents. The open coding, whilst enabling the researcher to label phenomena, will result in the data being fragmented. The next stage of the process preferred by Strauss and Corbin is Axial coding.

4.6.2. Axial Coding

Axial coding is a process by which 'data are put back together in new ways, following open coding, by making connections between categories (Strauss & Corbin 1990: 96). Strauss and Corbin define a category as:

'A classification of concepts. This classification is discovered when concepts are compared one against another and appear to pertain to a similar phenomenon. Thus the concepts are grouped together under a higher order, more abstract concept called a category.'

(Strauss & Corbin 1990: 61)

This process is not endorsed by Glaser (1992) as he suggests that this forces concepts out of the data as discussed earlier. Strauss and Corbin (1990) describe the use of the Paradigm Model to identify relationship between or within categories. Figure 4.1 gives a schematic view of this model.
The paradigm model identifies and facilitates the process of axial coding by describing the phenomenon and its relationship with other concepts as follows:

- **Causal Conditions**: The cause of the phenomenon are identified at this stage.

- **Context**: The context describes the properties that relate to the phenomenon. Strauss and Corbin (1990) describe context as 'the location of events or incidents pertaining to a phenomenon within a dimensional range' (1990:101).

- **Intervening Conditions**: Intervening conditions describe the facets that have an effect on the action/interaction strategies.

- **Phenomena/Category**: The phenomena are the main object of the paradigm model and refer to the properties in the context. Strauss and Corbin (1990) describe these as having distinct properties.

- **Action/Interaction Strategies**: The action/interaction strategies are a component of a paradigm and may alter and develop over periods of time. Generally, this may be done for some particular reason.

- **Consequences**: The consequences of constant comparative models is a understanding because of grounded theory (Glaser & Strauss, 1990). Description may be found in Strauss & Corbin.

Figure 4.1. - Paradigm model
The paradigm model identifies and facilitates the process of axial coding by describing the phenomenon and its relationship with other concepts as follows:

_Causal conditions_. The causal conditions that led to the phenomenon are identified at this stage.

_Phenomena_. The specified category or phenomenon is the main concept or issue identified from the data. In this study, the phenomena were identified from the open codes that emerged from the open coding process.

_Context_. The context describes the properties that relate to the event. Strauss and Corbin describe context as '...the location of events or incidents pertaining to a phenomenon along a dimensional range.'

(Strauss and Corbin 1990:101)

_Intervening conditions_. Intervening conditions describe the facets that have an effect on the action/interactional strategies.

_Actional/Interactional_. The action/interactional aspect of the paradigm model refers to the response the particular phenomenon. Strauss and Corbin (1990) describe this aspect as having two distinct properties. Firstly, this aspect may be a component of a process and as such may alter and develop over a period of time. Secondly, it may be done for some particular reason.

The processes of constant comparison, which is a underpinning feature of grounded theory (Glaser & Strauss 1967, Charmaz 2008, Corbin & Strauss
2008), involves both inductive and deductive thinking where the researcher thinks inductively to make general comparisons between concepts derived from data and then uses deductive thinking to verify such concepts with evidence from the data, literature and other means.

Inductive thinking may be influenced by the previous experience and expertise of the researcher. Strauss and Corbin (1990) refer to this as theoretical sensitivity whereby expertise, experience and certain types of literature, including biographies and research articles, 'sensitizes' the researcher to the phenomenon being studied (Strauss & Corbin 1990: 42). They suggest that theoretical sensitivity will speed the process of theory development. In this study the researcher has extensive nursing and military nursing experience. After completing nurse training in the NHS and undertaking two years post registration experience, he has served in the RAF for 24 years. The nature of his military nursing service has enabled the researcher to gain experience in clinical, nursing management and policy in addition to deployment experience. Such experience has also included serving in military hospitals and MDHUs. In addition, the literature search for this study included the reading the personal accounts of military nurses who have been deployed from World War Two to present day which will be an appropriate addition to theoretical sensitivity.

Once the process of axial coding is complete, the next stage of the process is to identify a core category through the process of Selective Coding.
4.6.3. Selective coding

Strauss and Corbin define the process of selective coding as 'The process of selecting the core category, systematically relating it to other categories, validating relationships, and filling in categories that need further refinement' (Strauss & Corbin 1990: 116). Strauss and Corbin (1990) debate the issue of the scenario where more than one core category arise following interpretation of the data, but emphasise that the researcher needs to make a choice between them. The process of relating categories to formulate a core category is similar to that in axial coding and it is recommended that the paradigm model is used for this process.

4.6.4. Memos

Memos are used throughout the process of grounded theory to note down thoughts as the research study unfolds and as a means of noting concepts and theories that may develop as well as identifying possible relationships between concepts and codes (Strauss & Corbin 1990). Charmaz (2008) describes memos as a means of recoding all aspects of the research journey.

Memos are not meant to be grammatically correct and they do not have any prescriptive format although Charmaz (2008) does give some examples of how the researcher can format memos. Smith and Biley (1997) refer to memos as notes to self. In this study the researcher used memos at all stages of the research process. A note book was used so that memos were easily found. They consisted of both written and schematic diagrams that related to interviews and to the data analysis. The researcher also used electronic means such as a computer and a Smartphone to record thoughts which were then transferred to the note book.
The grounded theory process described above was used throughout this research study. Despite the researcher being a novice grounded theorist, the steps used eased the process and will add to the validity of the research as the researcher is able to demonstrate all the steps that were undertaken in this study. Such transparency will add validity to the research process and is also deemed as good practice in grounded theory (Parahoo 2009).

4.6.5. Data saturation
Corbin and Strauss (2008) recommend that data should be collected until data saturation occurs; that is when no new data emerges. Therefore, there is no specific direction on sample size but the intention is to ‘achieve thick rich description’ (Corbin & Strauss 2008: 324) for the purpose of theory building. Charmaz (2008) highlights that the ethos of grounded theory is to develop conceptual categories from data and the researcher should not be concerned with the sample size. Guest et al. (2006) found that data saturation occurred within the first twelve interviews. This study was based on interviews alone and did not take into account other data that could contribute to a study such as surveys and participant observation.

4.7. Rigour
The researcher needs to demonstrate rigour in grounded theory. Chiovitti and Piran (2003) recommend that the researcher includes how credibility, auditability and fittingness are addressed in their study. For example using the words of the participant is a way to address credibility. Details of how participants were selected would contribute to auditability and a description of how the literature relates to a category would address fittingness.
Therefore the use of grounded theory has been chosen for this study with the aim of generating theory. Both quantitative and qualitative methods have been used which will provide suitable data for a grounded theory approach. It is important that details pertaining to data collection, analysis as well as identifying the criteria for participant selection are demonstrated in the study. Attention to credibility, auditability and fittingness of the study will demonstrate rigour.
Chapter Five

Part one - Questionnaire

5.1. Introduction

The study is divided into two distinct phases; this chapter will describe part one of the study. Part one of the study was a survey which aimed to collect demographic data and descriptive data regarding the preparation that military nurses received prior to deployment, their preparedness whilst on deployment and any new tasks or roles that they had undertaken. The questionnaire was designed to gather demographic data, details about deployments and also to provide an interview cohort for part two of the study. The questionnaire was used as it was simple and enabled distribution to a large number of military nurses. It was also used to explore the value of the study.

Part two of the study involved qualitative interviews which will be discussed later. This chapter will discuss the findings of the questionnaire following completion of Part 1 of the study. This chapter will provide the rationale for the use of a survey in this study, the design of the questionnaire, distribution and data analysis.

5.2. Aims of part one

The aim of the overall aim of this study was to identify what factors enable nurses to care for patients when they are deployed in areas of conflict. The specific questions of part-one of the study were:

1. Do nurses have the requisite skills to ensure competence to practise when they are on deployed operations?
2. What impact does the current pre-deployment training have on their competence to work in an operational environment?
A review of the literature highlighted a gap in knowledge in this area. Indeed, there has been no research carried out in the UK regarding the issue of military nurses’ competence to practice in their operational roles.

5.3. Part one – Questionnaire

It was decided that a questionnaire would be an appropriate first step in gathering data about military nurses’ preparedness and competence for their deployment role. The targeting of a large population is one of the benefits of using questionnaire (Denscombe 1998) and was appropriate to target military nurses. Jackson and Furnham (2000) suggest that when considering using a questionnaire the following points need to be taken into account:

1. It measures the right thing.

2. It has clear, well thought-through dimensions or categories of what to measure.

3. It is user friendly.

4. It is simple and brief.

5. It is tailored to the client’s needs.

(Jackson and Furnham, 2000)

As there is no one electronic mail system that would reach all military nurses it was decided to post questionnaires. Sudman and Bradburn (1982) suggest that postal questionnaire should be brief to encourage completion by the participant but warn that there could be collusion between respondents which could affect the viability of the data. Whilst the issue of collusion is acknowledged, military
nurses are spread across numerous military establishments and represent all three military nursing services. Therefore, the probability of collusion affecting the data was considered negligible.

The construction of a questionnaire requires careful design and planning to ensure that it fits with both the research question and the target audience. Peterson (2000) suggests that certain key elements are considered when constructing a questionnaire (see figure 5.1).
Review information requirements of problem, opportunity, decision to be made and so on.

Develop and prioritize a list of potential research questions to provide required information.

Evaluate each potential research question:
*Can* potential participants *understand* the question?
*Can* potential study participants *answer* the question?
*Will* potential study participants *answer* the question?

Determine type(s) of question to be asked:
- Open-end question(s)
- Closed-end question(s)

Decide on specific wording of each question to be asked.

Determine questionnaire structure.

Evaluate questionnaire.

*Fig 5.1 - Steps in Constructing a Questionnaire (Peterson, 2000, p.14)*

These themes were considered in the designing of the questionnaire for part one of the study and will be discussed later. The issue of whether to include open
questions needs careful consideration by the researcher (Sudman & Bradburn 1982, Jackson & Furnham 2000, Peterson 2000). Peterson (2000) suggests that open questions will:

- Enable freedom of response.

- May promote a verbosity effect.

- There may be a 'space-time' effect.

Whilst the freedom of response may produce some valuable information, the researcher may find that the answers given are not the ones expected. The verbosity effect, where respondents give a long a detailed answer, may be due to the participant's interest in the question. However, such wordy answers may cause problems in the interpretation of the information given by the recipient. Too much space given, in free text boxes, for the respondent to reply to a question may imply to the participant that the answer must fill the box. Conversely, if the box size is restricted this may in turn restrict the answer given by the respondent. Buckingham and Saunders (2004) propose that the respondent may not want to write responses and this in turn could lead to a reduction in the response rate.

Peterson (2000) suggests that the use of a questionnaire is beneficial at the start of a research project as it is way of generating ideas for further research. This was the intention for this part of the study. The questionnaire was intended to provide demographic details, facts regarding deployments and to provide a pool of volunteers for part two of the research study.

The demographic data sets which were included in the questionnaire were adapted from current questionnaires used by the Ministry of Defence (MoD) in
military satisfaction surveys. This meant that the respondents would be familiar with the layout of the questions which is seen by Rattray and Jones (2007) to be good practice when constructing questionnaires. The questionnaire sent to respondents is at appendix one. The questions asked the individual to indicate the nursing speciality they currently worked in, the date they registered as a nurse, their rank, gender and the years that they had served in both the military and the Defence Nursing Services. The respondent was also asked to indicate where they had been deployed and the frequency of such deployments. The remaining questions asked respondents to give further details about their deployments which included a list of the injuries that they may have seen and had to care for. The questions asked the respondent to indicate, on a Likert Scale from 1 to 5, how prepared they felt undertaking a particular task on deployments.

The content of these questions, which included details of injuries, were crossed mapped from data that was already being collected by the Defence Medical Services with regards to the injuries and conditions that are seen on deployment. A free text box was also included to allow participants to describe any tasks or roles that they had undertaken for the first time. The use of free text box is seen as an advantage on questionnaires to enable respondents to articulate a more comprehensive response to a question (Pallant, 2007), but there are also disadvantages to using open ended questions in a questionnaire that were discussed earlier. Questions and instructions were carefully considered in order to make the questionnaire easy to read and complete. It was acknowledged that instructions for completion of questions should be concise and should include what is required from the participant. For example, should a box be ticked or crossed or what the definitions relate to grading on the Likert Scale (Bradburn et al, 2004). The Likert scale for these questions ranged from one to five. Number
one on the scale indicated that they felt that they had not been prepared to care for a particular injury to number five on the scale which indicated that they felt fully prepared. Despite such considerations being made when designing a questionnaire, it was acknowledged the respondent may still not answer the question (Jackson & Furnham 2000). This did occur in this questionnaire and this was recorded as missing data. During the data analysis, there appeared to be no commonality linked to participants not answering questions therefore it could not be assumed that this was due to flaws in the design of the questionnaire.

Prior to distribution to all military nurses, a draft questionnaire was sent to a military nurse in each of the Royal Navy, Army and RAF nursing services for comment. Minor amendments were made following receipt of their comments.

During the ethical approval process, the questionnaire was amended further by the RAF medical ethics committee. Specifically, the committee amended the groups of injuries to include caring for patients who had suffered injuries from road traffic accidents, injuries related to aviation, training and sports injuries. These amendments removed the majority of the data sets which had been included on the original draft of the questionnaire. However, the Army asked for the inclusion of blast injuries which the RAF Ethics Committee supported. An information sheet was also written which was attached to the questionnaire. The information sheet gave details of the study and the contact details of the researcher and the research supervisor should the participant want to ask any questions about the study. Indeed, the researcher did receive some queries (n=5). The questions related to if a participant was able to return the questionnaire after the cut off date and also one from a particular participant who
explained he was really interested in the study and would provide extra information if this was required.

5.4. Ethical approval process and considerations

The ethical process was labour intensive and the programme of events is detailed in appendix two. Advice was gained from the Defence Medical Deanery regarding the process for MoD ethics application, but there was a subsequent lengthy delay due to incorrect information being given regarding the submission and route for the ethical application (appendix three). In the early part of the ethical process, one gatekeeper for the ethical approval process articulated his doubts regarding the value of qualitative studies. Following a very lengthy telephone conversation the researcher was able to gain support in order to process the application.

The ethical process was still slow and the researcher asked for further advice and guidance from the Defence Medical Services Deanery. Following further discussion, the ethical approval application was then submitted through the RAF medical ethics committee. Preliminary approval was given, following the amendments to questions, as discussed earlier, and other minor amendments that were requested. The application was then sent to the MOD Research Ethics Committee (MoDREC) who granted their approval (appendix four).

An application for Ethical Approval was sent to the University of Surrey with the details of the MOD Research Ethics Committee approval (appendix five) and ethical approval was granted (appendix six) for the study.

It is essential that ethical approval is gained before any research study is undertaken (Royal College of Nursing, 2009), and ethical considerations for
questionnaires are no different from any other research strategy. Badly phrased questions can lead to inaccurate data being collected, but more importantly questions could also lead to distress of the participants. Given the nature of this study, and the fact that the questionnaire could trigger some emotional issues, this aspect was taken seriously. However, the researcher did not receive any feedback regarding personal issues caused by the questionnaire. Conversely, positive feedback was received, respondents welcoming the opportunity to discuss their experiences.

The questionnaire was sent to named military nurses who were identified on personnel data bases that were received from the single nursing services human resources departments. Names were anonymised when entering data into SPSS, a computer software program used for the analysis of quantitative data. Individuals were allocated a number for data processing reasons and to enable retrieval of the data as and when required.

5.5. Potential hazards

As discussed, given that part one of the study was a questionnaire, potential hazards, risks or adverse effects associated with the study had been considered and were thought to be negligible. The questionnaires may have caused upset to participants as the questions were based around an individual's deployment and such deployments may have been traumatic. If this was an issue, the individual was encouraged to seek support through the researcher. This did not occur, but it was acknowledged that the participant could have accessed support by other means and not discussed their concerns with the researcher.

The opportunity to participate in in-depth interviews was offered on the questionnaire. It was intended that this would give the participants an opportunity to tell their own stories about their experiences whilst on deployment.
5.6. Review by stakeholders

Once ethical approval had been granted by the University of Surrey, the questionnaire and information sheet was sent to the Directors of Nursing of the Defence Nursing Services with a letter asking for approval to contact military nurses in their respective military service. Approval was duly granted to approach military nurses.

5.7. Access to participants

The Royal Navy and Royal Air Force manning departments forwarded contact details of military nurses. The Army was somewhat slow in their response as they believed that there could be issues with the Data Protection Act and the release of contact details. However, after negotiation with the relevant Data Protection Department, approval was given. This delayed the distribution of questionnaires to Army nurses. Moreover, the details that were received from the Army had contact details missing which the researcher had to find manually which proved to be time consuming.

In addition to deployments and duties on military exercises, military nurses are posted on a regular basis and it was accepted that some military nurses would not receive the questionnaire and that there may be responses received after the closing date.

5.8. Distribution

The questionnaire was sent to all military nurses (n = 1364) whose contact details could be determined. Questionnaires were sent out in December 2008. The Navy and the RAF had a return to date of 31 January 2009 and the Army 29 February 2009. The dates were different due to the delay in collating the Army
contact details and the subsequent delay in the dispatch of these questionnaires. The use of a cut off date was hoped to encourage the respondent to reply and is seen as good practice in questionnaire design (Bradburn et al, 2004).

A stamped addressed envelope was included with the questionnaire along with an information sheet. The enclosure of a stamped addressed envelope has been found to yield a higher response rate (Polit and Beck, 2008) and it was decided that this would be appropriate for this study.

Following dispatch of the questionnaires, there was an initial surge in response, but this tailed off. In view of the lull in responses, an e-mail was sent to senior line managers of the key military medical facilities to remind personnel of the study and to encourage them to return the questionnaire. Individuals could not be sent an email directly as email correspondence details were not available and military nurses working outside military basis would not receive correspondence that was sent by means of the Defence intranet.

5.9. Response rate

Table 5.1 shows the response rate up until 21 May 2009.

<table>
<thead>
<tr>
<th></th>
<th>Number of questionnaires posted</th>
<th>Number of questionnaires returned (completed)</th>
<th>Number of questionnaires returned (not delivered)</th>
<th>Number of questionnaires returned (not deployed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Royal Navy</td>
<td>232</td>
<td>44 (19%)</td>
<td>15</td>
<td>22</td>
</tr>
<tr>
<td>Army</td>
<td>508</td>
<td>122 (24%)</td>
<td>Nil</td>
<td>11</td>
</tr>
<tr>
<td>Royal Air Force</td>
<td>445</td>
<td>199 (45%)</td>
<td>9</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>1185</td>
<td>285 (24%)</td>
<td>24</td>
<td>44</td>
</tr>
</tbody>
</table>

Table 5.1 - Response Rates up to 21 May 09
A response rate of less than 30 percent can be expected from individual surveys and no more than 50 percent for organisational questionnaires (Klandermans and Staggenborg, 2002). This view is supported by Buckingham and Saunders (2004) who suggest that a response rate of 10 to 20 percent is not uncommon. Denscombe (1998) reassures researchers that a response rate of 20 percent for a postal questionnaire is good and recommends that large mailing of questionnaires are distributed to ensure that sufficient data is gathered. The overall percentage return rate for part one of this study was 24%. It is assumed that the response rate could have been influenced by incorrect contact information being held on the data bases. Moreover, the response rate may be the affected due to personnel leaving the military nursing services, being posted to another location or they could have been on operational deployment duties at the time of the survey. It is worthy of note that the RAF response rate was 45%. It is assumed that the response rate is higher in the RAF in comparison to the Royal Navy (19%) and the Army (24%) as the RAF has a dedicated officer who only deals with nurse manning issues and also works alongside the researcher. The lower response rate from Army nurses could also be the result of issues establishing contact details for Army personnel which was discussed earlier.

5.10. Data analysis

Data was entered into the SPSS computer program for analysis. Data was allocated a corresponding numerical label which corresponded to the number on the questionnaire. An additional data theme was added to determine how many times a respondent had been deployed to Iraq, Bosnia, Afghanistan or another location.
5.11. Results

The entering of results into SPSS was time consuming, but was beneficial as the researcher was able to find statistical data with ease. It also allowed the researcher to update results on receipt of questionnaire, some of which arrived after the cut off date.

5.11.1. Demographics

The gender of the respondents was 36% male and 64% female. This is further broken down in table 5.2 with rank.

Table 5.2: Gender Split for Respondents to Deployment Questionnaire

<table>
<thead>
<tr>
<th>SERVICE</th>
<th>MALE</th>
<th>FEMALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>RN OFFICERS</td>
<td>34%</td>
<td>66%</td>
</tr>
<tr>
<td>RN OTHER RANKS</td>
<td>30%</td>
<td>70%</td>
</tr>
<tr>
<td>ARMY OFFICERS</td>
<td>35%</td>
<td>65%</td>
</tr>
<tr>
<td>ARMY OTHER RANKS</td>
<td>35%</td>
<td>65%</td>
</tr>
<tr>
<td>RAF OFFICERS</td>
<td>44%</td>
<td>56%</td>
</tr>
<tr>
<td>RAF OTHER RANKS</td>
<td>15%</td>
<td>85%</td>
</tr>
</tbody>
</table>

The comparison between the number of males and females across the ranks in the Defence Nursing Services compared with those being deployed as a whole is broadly similar.

There is a difference between the gender split in the Defence Nursing Service compared with the total number of nurses registered with the Nursing and Midwifery Council (NMC). The NMC register recorded 11% male registrants in 2008 compared with 89% female registrants (Nursing and Midwifery Council
2008e). The data from this study demonstrates that there is a higher proportion of male nurses employed in the military services compared to the NMC percentage gender split.

5.11.2. Rank and length of service

With regards to rank, the highest numbers of respondents were in the junior officer cadre of all three of the military nursing services that is Lieutenant to Commander in the Royal Navy, 2nd Lieutenant to Major in the Army and Flying Officer to Squadron Leader in the Royal Air Force. Whilst it could be concluded that this cadre deploys more than the other ranks, given the low response rate this hypothesis cannot be assumed. The average length of time served in the Defence Nursing Services was 11 years (SD = 7).

5.11.3. Deployment data

The data for deployments was recorded on SPSS from the questions that were included in the survey. The number of deployments ranged from one to nine with 44 respondents reporting that they had not yet been deployed. This could be due to lack of experience, medical factors or not being able to be released from their peacetime role. However, this information was not requested on the questionnaire. The deployment location number represents the first deployment the participant undertook. The details of the deployments are as follows:

5.11.4. Deployment location 1

The dates for deployment one ranged from 1982 to 2009. The locations were various and included the Falkland Island and Northern Ireland. The highest percentages of locations reported were Iraq (43%), Bosnia (17%) and Afghanistan (17%). These figures highlight that the first deployment for many military nurses was Iraq. Bosnia was a smaller scale deployment in comparison
to Iraq. Operations in Afghanistan were maturing and this is reflected in the casualty data that will be discussed later.

The individual's perceived preparedness to care for patients whilst on deployment is shown in table 5.3.

**Table 5.3. - Preparation for deployment 1**

<table>
<thead>
<tr>
<th>HOW WELL PREPARED DID YOU FEEL? (1 = not prepared; 5 = prepared)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTA</td>
<td>2% (5)</td>
<td>8%(16)</td>
<td>20%(43)</td>
<td>33%(69)</td>
<td>37%(78)</td>
</tr>
<tr>
<td>Aviation</td>
<td>5%(3)</td>
<td>16%(10)</td>
<td>22%(14)</td>
<td>21%(13)</td>
<td>33%(21)</td>
</tr>
<tr>
<td>Training Injury</td>
<td>2%(3)</td>
<td>7%(13)</td>
<td>19%(34)</td>
<td>30%(53)</td>
<td>42%(75)</td>
</tr>
<tr>
<td>Sports Injury</td>
<td>3%(6)</td>
<td>8%(16)</td>
<td>16%(31)</td>
<td>26%(18)</td>
<td>47%(92)</td>
</tr>
<tr>
<td>Blast Injury</td>
<td>8%(16)</td>
<td>20%(38)</td>
<td>19%(37)</td>
<td>25%(49)</td>
<td>28%(54)</td>
</tr>
</tbody>
</table>

Only twenty eight per cent of participants felt that they were fully prepared to care for patients who had sustained blast injuries. This could reflect that the number of wounded was low during the initial war fighting phase of the operations in Iraq and Afghanistan which will be discussed in greater depth later in the study.

**5.11.5. Deployment Location 2**

The dates for location two ranged from 1982 to 2008. Again the locations varied but there was a change in the balance of percentages for the deployments. Twenty-nine per cent of respondents went to Bosnia, 38% to Afghanistan and 83% to Iraq. The injury breakdown for location 2 is shown in table 5.4. The mean year for deployment in this cohort was 2003 (SD=5) with an increase in the percentage reporting that they were deployed to Iraq. This would coincide with

---

1 Percentages shown are the valid percentage taking into account missing data. Percentages have been rounded up or down.

2 (n) = number of respondents to the question.
the start of the Iraq war in 2003. There is an increase in those feeling prepared to look after patients in all injury groups.

Table 5.4. - Preparation for deployment 2

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTA</td>
<td>2%(3)</td>
<td>7%(11)</td>
<td>15%(23)</td>
<td>28%(42)</td>
<td>48%(72)</td>
</tr>
<tr>
<td>Aviation</td>
<td>2%(1)</td>
<td>18%(9)</td>
<td>18%(9)</td>
<td>28%(14)</td>
<td>35%(5)</td>
</tr>
<tr>
<td>Training Injury</td>
<td>3%(3)</td>
<td>4%(5)</td>
<td>9%(10)</td>
<td>30%(35)</td>
<td>54%(63)</td>
</tr>
<tr>
<td>Sports Injury</td>
<td>1%(1)</td>
<td>6%(8)</td>
<td>14%(18)</td>
<td>26%(34)</td>
<td>53%(69)</td>
</tr>
<tr>
<td>Blast Injury</td>
<td>5%(6)</td>
<td>6%(7)</td>
<td>14%(17)</td>
<td>28%(32)</td>
<td>48%(56)</td>
</tr>
</tbody>
</table>

The data suggest that more respondents felt more prepared to care for patients in these groups. This may be due to the fact that nurses had seen similar injuries on previous deployments and felt more confident and competent in caring for them. However, the percentage of those who felt prepared for patients in these groups did not rise above 54%.

5.11.6. Deployment Location 3

The dates for deployment for location three ranged from 1986 to 2009. Deployments to Iraq were reported to be the higher location for deployment (37%) followed by Afghanistan at 28% and Bosnia at 17%. Again, there is indication that nurses felt better prepared for all groups of patients in comparison to location one and three with the highest percentage being 61% for training injuries.
Table 5.5. - Preparation for deployment 3

HOW WELL PREPARED DID YOU FEEL? (1 = not prepared; 5 = prepared)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTA</td>
<td>1%(1)</td>
<td>5%(4)</td>
<td>11%(8)</td>
<td>21%(16)</td>
<td>62%(47)</td>
</tr>
<tr>
<td>Aviation</td>
<td>11%(3)</td>
<td>15%(4)</td>
<td>19%(5)</td>
<td>19%(5)</td>
<td>37%(10)</td>
</tr>
<tr>
<td>Training Injury</td>
<td>3%(2)</td>
<td>5%(4)</td>
<td>12%(9)</td>
<td>19%(14)</td>
<td>61%(46)</td>
</tr>
<tr>
<td>Sports Injury</td>
<td>3%(2)</td>
<td>5%(4)</td>
<td>15%(11)</td>
<td>19%(14)</td>
<td>59%(44)</td>
</tr>
<tr>
<td>Blast Injury</td>
<td>5%(3)</td>
<td>6%(4)</td>
<td>12%(8)</td>
<td>28%(18)</td>
<td>50%(32)</td>
</tr>
</tbody>
</table>

5.11.7. Deployment Location 4

The data for the location of deployment 4 indicated that 50% of personnel were deployed to Iraq, 21% to Bosnia and 13% to Afghanistan. These data show a decrease in those personnel going on deployment to Afghanistan. However, some personnel did only report one deployment and this may have affected the results of the survey. The dates of the deployments ranged from 1997 to 2008. There is also an increase in those feeling fully prepared to look after all groups of patients apart from Road Traffic Accidents which showed a two per cent drop. However, this could be due to the reducing number of respondents to the question and also the RTA figures could have reduced. However, there are no data available to corroborate this.
Table 5.6. - Preparation for deployment 4

HOW WELL PREPARED DID YOU FEEL? (1 = not prepared; 5 = prepared)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTA</td>
<td>(0)</td>
<td>(0)</td>
<td>27%(4)</td>
<td>13(2)</td>
<td>60%(9)</td>
</tr>
<tr>
<td>Aviation</td>
<td>(0)</td>
<td></td>
<td>14%(1)</td>
<td>29%(2)</td>
<td>14%(1)</td>
</tr>
<tr>
<td>Training Injury</td>
<td>(0)</td>
<td></td>
<td>7%(1)</td>
<td>7%(1)</td>
<td>14%(2)</td>
</tr>
<tr>
<td>Sports Injury</td>
<td>(0)</td>
<td></td>
<td>6%(1)</td>
<td>6%(1)</td>
<td>18%(3)</td>
</tr>
<tr>
<td>Blast Injury</td>
<td>(0)</td>
<td></td>
<td>8%(2)</td>
<td>23%(3)</td>
<td>8%(1)</td>
</tr>
</tbody>
</table>

5.11.8. Deployment Location 5

The deployment dates for location five ranged between 2001 and 2008. Reported deployments to Bosnia fell to 6.2%. Those to Iraq stayed at 50% and to Afghanistan 13%. The number of those feeling fully prepared in the training and sports and blast injury groups has shown some reduction. It is worthy of note that yet again the number of participants answering this question has reduced which could have affected the results.

Table 5.7. - Preparation for deployment 5

HOW WELL PREPARED DID YOU FEEL? (1 = not prepared; 5 = prepared)

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTA</td>
<td>0</td>
<td>0</td>
<td>8%(1)</td>
<td>15%(2)</td>
<td>77%(9)</td>
</tr>
<tr>
<td>Aviation</td>
<td>0</td>
<td>0</td>
<td>25%(1)</td>
<td>25%(1)</td>
<td>50%(2)</td>
</tr>
<tr>
<td>Training Injury</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>23%(1)</td>
<td>70%(9)</td>
</tr>
<tr>
<td>Sports Injury</td>
<td>0</td>
<td>0</td>
<td>7%(1)</td>
<td>21%(3)</td>
<td>71%(10)</td>
</tr>
<tr>
<td>Blast Injury</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>43%(3)</td>
<td>58%(4)</td>
</tr>
</tbody>
</table>

93
5.11.9 Deployment Location 6

The dates for deployment to location 6 ranged between 2007 and 2009. The percentage for deployments in a particular location changed again. Afghanistan increased to 33% which was the same as Iraq. Bosnia was 22%. The increase in deployment percentage to Afghanistan would be realistic as war fighting in this area started to increase in this period. Again the number of participants feeling fully prepared fell in all groups apart from training injuries. Again, this could be due to the number of participants answering the question. The casualty rate for Iraq fell from 2008 compare to Afghanistan that showed an increase from this period (Table 5.10 and Table 5.11). Therefore, the drop in preparedness for blast injuries could be related to the mechanism of injury. IEDs are used more in Afghanistan compared with Iraq and therefore the resulting trauma will be different.

Table 5.8. Preparation for deployment 6

<table>
<thead>
<tr>
<th>HOW WELL PREPARED DID YOU FEEL? (1 = not prepared; 5 = prepared)</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>RTA</td>
<td>0</td>
<td>0</td>
<td>17%(1)</td>
<td>17%(1)</td>
<td>70%(4)</td>
</tr>
<tr>
<td>Aviation</td>
<td>0</td>
<td>0</td>
<td>33%(1)</td>
<td>33%(1)</td>
<td>33%(1)</td>
</tr>
<tr>
<td>Training Injury</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>17%(1)</td>
<td>83%(5)</td>
</tr>
<tr>
<td>Sports Injury</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>33%(2)</td>
<td>67%(4)</td>
</tr>
<tr>
<td>Blast Injury</td>
<td>14%(1)</td>
<td>0</td>
<td>29%(2)</td>
<td>29%(2)</td>
<td>29%(2)</td>
</tr>
</tbody>
</table>

5.11.10. Deployment Location 7-9

It was decided to not include the data from these locations due to the low number of respondents (Location 7 n=5, Location 8 = 2 and Location 9 n=2). This is a reflection of the total number of deployments that military nurses have had to
undertake to date. However, if deployments to Afghanistan continue, the number of military nurses undertaking seven or more deployments will increase.

5.12. New tasks and roles

Respondents were asked if they had completed tasks or roles that they had not undertaken before. Table 5.9 indicates the number of personnel who had completed new tasks or roles during their deployment.

<table>
<thead>
<tr>
<th>Location</th>
<th>Location</th>
<th>Location</th>
<th>Location</th>
<th>Location</th>
<th>Location</th>
<th>Location</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>60%</td>
<td>45%</td>
<td>47%</td>
<td>41%</td>
<td>60%</td>
<td>57%</td>
<td>67%</td>
</tr>
</tbody>
</table>

The respondents then described in free text what new tasks or roles that they had undertaken. The free texts were analyzed and grouped into themes using a grounded theory approach. However, the analysis only went as far as open coding. These themes included military skills, nursing skills, specialist nursing skills care of prisoners and local population in health facilities, care of prisoners and the local population in other facilities, leadership skills, management skills, and care and treatment of specific injuries. Where the data regarding the preparation to care for patients in a particular injury group have shown an increase in preparedness with continued deployment, the findings suggest that over 50 per cent of military nurses report exposure to new tasks on each deployment. Some of the new tasks and roles that were described by participants are discussed below.
5.13. Military Skills

Military nurses have a dual role, that of being a member of the military services and also being a nurse. Military skills are taught throughout an individual's employment in military service and specific military skills are enhanced in pre-deployment training. However, like nursing skills, not all skills will be covered in the pre-deployment training schedule. Some respondents reported undertaking driver duties and watch keeping duties. Other duties included:

"Siting of helicopter landing site and refuel points in conjunction with the Royal Engineers and the RAF Tactical Support Wing.

Driving aviation refuelling vehicles..."

Another responded referred to providing military cover for others.

"Top cover for vehicle convoys...."

One would assume that 'top cover' was armed support for vehicle convoys, but this fact cannot be confirmed by analysis of this data. If the assumption is correct, it is hoped that such top cover was for medical vehicle convoys. Under the Geneva Convention (ICRC 1997), medical personnel are deemed non-combatant, but are allowed to defend themselves, their patients and medical facilities.

The participants referred to military support duties that they had carried out in the actual area of conflict and also at the deployment bases, but such descriptions were fairly brief.

5.14. Nursing Skills

New roles and tasks reported by respondents included the utilisation of new nursing skills whilst on deployment. Whilst these skills would have arguably been seen as essential for the care of patients that military nurses would be expected
to see, it was apparent that training or indeed experience had not taken place in
the pre-deployment period. Some examples of comments highlight this issue:

"Dressing of burn injury"

"Giving intravenous drugs"

"IVs [intravenous medications] cannulation, venepuncture"

"Not done IVs since qualifying"

These are relatively standard procedures which, and if deficient, could be
rectified quite easily. However, access to the training and consolidation
experience in order to carry out these skills in a competent manner will be
dependent on where the nurse is employed in their peacetime role. For example,
nurses working in primary care will most likely not have the opportunity to
cannulate or give intravenous drugs. Even in secondary care procedures such
as venepuncture may be carried out by specialist personnel such phlebotomists,
so nurses may not have the need or indeed the opportunity to practice this skill.
In addition to some nurses articulating their deficiencies in what could be deemed
as basic nursing skills, some respondents referred to lack of specialist nursing
skills.

5.15. Specialist Nursing Skills

The International Council of nurses define specialist nursing as nursing practise
that has not been taught in registered nurse training (International Council of
Nurses 1987). The care of paediatrics was noted as an issue as the DNS no
longer employs paediatric nurses. The care of paediatrics was obviously a
concern but was expected as the military medical and nursing staff had a
responsibility to look after the local population. This is an obvious training deficit
with some patients requiring specialist paediatric nursing intervention. The comments included care of burns, paediatrics and ventilated patients:

"Transfer of a 1yr old burns patient....."

"Taking care of paediatric patients"

"Looking after ventilated paediatrics"

Apart from caring for children, nurses assumed specialist nursing roles that they had not undertaken before or had not received the appropriate training to undertake these roles:

"Aeromed Duties" [these could range from organising a transfer by air to accompanying a patient on an aircraft]

"Burns patients. Surgical dressings – not worked on a general surgical ward"

"I was working on an elective orthopaedic ward at the time so the injuries I saw I had no experience looking after these injuries (e.g. amputations, gunshot wounds etc)"

"Primary Health Care"

Apart from the specialist role of aeromedical evacuation, it would appear that military nurses are not afforded the appropriate nursing experience in peacetime that they require for their deployable role. This would suggest that the underpinning reason for moving military medical personnel to MDHUs to expose them to clinical skills necessary for deployment is not working in some instances. Again, this hypothesis needs further exploration.
5.16. Care of prisoners and the local population

Nurses commented on being called on to care for prisoners and the local population:

"Psychiatric support to Iraq civilians"

"I was the 2IC [second in command] of the jail medical section"

"Care of refugees including children and pregnant women"

"Caring for detainees"

It is current practice for injured prisoners and local civilians to be cared for alongside British troops. However, the media have questioned the ethics of this practice. The Daily Mail reported concerns from military patients about being cared for next to Taliban patients (Mail Online 1999). The article cited the Surgeon General and politicians who said that it was normal practice to look after prisoners of war in time of conflict and that these patients would be moved to a dedicated area for prisoners of war once their condition allowed. It is a requirement for the military medical services to care for enemy patients and is articulated in the Geneva Convention (ICRC 1997). The media questioned the obligation to look after Taliban patients who were not signatories of the Geneva Convention (Mail Online 1999).

5.17. Military leadership and management skills

Nurses highlighted issues when having to manage situations or to undertake tasks that they had not undertaken before.

"Co-ordinating a major incident"

"Run pharmacy and dispensed with no qualification to do so"
"Vehicle Commander"

The leadership and management roles varied in nature. Whilst nurses do undergo pre-deployment training, which includes working in a simulated field hospital, the beneficial effects of military exercises could be explored in from the questionnaires. If the role of the Defence Nurse is to become more encompassing, the current management and leadership training, which takes place throughout their military career, may need to be reviewed. However, these issues may be related to rank. This information could not be gleaned from the questionnaire, but will be addressed later in this study.

5.18. Care and treatment of specific injuries

Respondents referred to care and treatment of specific injuries that fell outside of the roles asked in the questionnaire. Most of these injuries were battle injuries and would be expected in the current conflicts:

"All surgery was new as we were dealing with multiple injuries, head injuries and both orthopaedic and general surgery"

"Gunshot wounds"

"We saw approx 50 patients injured due to either blast or gunshot. As a practice nurse I have not had to be part of a trauma team before this deployment"

"Treated injuries that I had not come across before"

Whilst there were issues with new tasks and roles that were encountered on deployment, it was reassuring that some felt that they had been adequately prepared:

"Being an experienced Primary Healthcare nurse prepared me for deploying into this role on ops. I felt much more competent with my role"

"My pre-tour training was extremely beneficial as was my in tour learning. I was lucky to have good senior support"
5.19. *Casualty data*

Appendices seven and eight detail the casualty statistics from Iraq and Afghanistan that have been obtained from the Defence Analytical Services Agency (DASA). The statistics include numbers of very seriously and seriously injured or wounded. The numbers admitted to field hospitals are also included and are broken down into wounded in action, diseases and non battle injuries.

The Iraq casualty figures start from the start of the conflict in 2003 until the cessation of hostilities in 2009. Casualty numbers reached their peak in 2007 (n=69) which was mirrored by a figure of 202 wounded in action. The high figures in 2003 may relate to the increased US led coalition operation which saw the demise of Saddam Hussein from power (National Archives 2010).

The Afghanistan data include casualty statistics from 2001 to 2009. The data shows an increase in casualties, including wounded in action, from 2006 and 2009 with 2009 showing the highest increase. Indeed, the statistics for 2009 shows more than a 50 per cent increase in the total number of casualties and also the numbers that were wounded in action. An increase in aeromedical evacuations (n= 800 to n=1,313), would suggest that these individuals required continuing care in the United Kingdom. The increase in battle injuries shown in the DASA statistics for Afghanistan in 2009 may have been due to the increased use of improvised explosive devices (IEDs) and the increased coalition military activity (Ministry of Defence 2010a).

Comparing the DASA figures with part one data, preparedness to care for blast injuries did show an increase from early deployments (28 per cent) to 58 per cent by deployment location 5. However, deployment location 5 only took into account deployments up to 2008. Given that the questionnaire cut off dates were 31 January 2009 for the Navy and Royal Air Force and 29 February 2009 for the
Army, the data collected would not reflect the increase in casualties that were shown in the DASA statistics. However, the data for part one of the survey suggests that no one felt fully prepared to care for patients suffering from blast injuries.

5.20. Discussion

The interpretation of the data from the questionnaire suggests that personnel did not feel fully prepared for some of the roles asked in the questionnaire. However, there was a general trend of an increased percentage of preparedness for all of the categories, except blast injuries which showed a decline by deployment location six, as the personnel experienced more deployments. The percentage of participants who did feel fully prepared for blast injury actually increased from deployment four which could mean that nurses felt more confident with more frequent exposure to a particular situation. One could surmise that the percentage could be misleading as the numbers who indicated that they went on deployment five or more times were very few. Also, the nature of injury could have changed due to the nature of war fighting in a particular area. This information could not be confirmed from the questionnaire data. This issue will be explored when interviewing participants in part two of the study.

The new task and role section on the questionnaire highlighted some interesting information with over 50% of respondents reporting that they had undertaken new tasks and roles in six of the deployment locations. Lack of training for military nurses has been highlighted in other studies albeit, not with the current conflicts in Iraq and Afghanistan. Biederman et al (2001) in their study of nurses who served in Vietnam referred to the lack of training, especially in areas of trauma. It has been highlighted in this study that respondents did have issues with nursing practice and specialist nursing skills. The dual role of the military
nurse, which includes being a member of the military services and a nurse, exposes them to duties that they would not be exposed to in peacetime. Providing cover for troop conveys is just one example that was highlighted in the data. A study by Griffiths and Jasper (2007) involving military nurses who had served in a conflict zone in the last ten years referred to this issue. The dilemmas of nurses caring for injured children and families of the host nation were also described by Griffiths and Jasper (2007). These difficulties were also highlighted in this study. However, there were positive experiences described such as being sufficiently prepared for deployment and valuing experiences that they had gained during deployment. Philpott (2007) in describing his experience of deployment, highlights the value and the uniqueness of the event. Such values are endorsed by Hagstad (2005) who was a military nurse who served in Iraq. Nevertheless, dealing with injuries in peacetime is not the same as treating injuries in a conflict zone. The data in this study highlighted the wide range of battle injuries that nurses had to deal with. Harrison (2005), on her visit to Iraq, heard how personnel were dealing with the injuries of war. Those interviewed explained that treating catastrophic injuries on deployment was not the same as treating patients in an emergency department back home. Working in tents presented particular challenges and living in portakabins did not afford some of the amenities, such as toilets and wash basins that can be normally expected at home.

Therefore, appropriate training before deployment is essential. The Nursing and Midwifery Council Code (2008b), stresses that nurses and midwives should only practice within their level of competence, but training may not prepare a military nurse for every eventuality as the nature of warfare and the mechanism, of injuries does change (Galbraith 2001, CNN Wire Staff 2010). Indeed, the new task roles identified areas of practice for which nurses were not prepared. These
included general nursing and specialist nursing skills as well as specific military duties. The fact that nurses will adapt to practice in the interest of the patient was explored in a study by Biederman and Harvey (2001) of Australian nurses who served in Vietnam. Nurses described how they undertook tasks such as intubation and triage as there was no one else who could undertake this role.

5.21. Limitations of part-one

It was hoped to have a higher response from the questionnaire (see chapter 5.9), but the movement of military nurses and absence due to deployment and military training could have precluded some individuals from responding to the questionnaire. Indeed, one questionnaire was received a year after the cut off date. However, the data received did provide valuable information. The free text information relating to new tasks and roles yielded very useful facts such as nursing and military roles that participants had carried out on deployment but had received no training for. The questionnaire enabled part one objectives to be addressed but the researcher acknowledged that there were deficiencies in the questionnaire. The group of injuries was very limited and did not really capture the illnesses and conditions that military nurses had to deal with on deployment. This issue was out of the control of the researcher as the RAF research ethics committee restricted these groups on the questionnaire. However, the use of free text boxes were beneficial and participants did include aspects of care that they were not comfortable with. These included blast injuries, burns, gunshot wounds and paediatric care.

Qualitative analysis, in part-two of the study allowed the other objectives to be met and enabled the researcher to explore issues that were highlighted in part one in more depth and also to put such issues in context which is not possible in a quantitative survey.
5.20. **Conclusion**

Part one of this study revealed some interesting and valuable information regarding the preparedness of military nurses on deployment. The statistics would suggest that confidence in the roles highlighted in the questionnaire increased with experience. However, the survey did not give enough scope to explore the issues raised by the respondents when they were asked if they had undertaken new tasks and roles. By placing the responses to the new task and role question into themes, it was apparent that nurses were undertaking general nursing tasks, specialist nursing tasks, leadership and management roles that they had not undertaken before. Also, the responses demonstrated the military nurse's role in caring for patients with injuries that are associated with warfare such as gunshot wounds and multiple trauma that are not often seen in a peacetime setting. If the trend of military nurses being exposed to new task and roles on deployment is significant, it would suggest that military nurses will not reach the echelons of expert practitioner if the facets of Benner's theory are applied. The suggestion that expert practice is related to experience and exposure to particular situations may have an effect on the definition of expert military nursing given that experience on deployment is short (circa four to six months) and that this exposure is sporadic and dependent on the nature of the deployment and with the additional requirement for specialist nursing skills. For example, the current operations in Afghanistan have resulted in more catastrophic injuries such as multiple trauma requiring different nursing skills. Therefore, using Benner's theory, it may take longer for a military nurse to reach the level of expert practitioner.

The military nurses who responded to the questionnaire also highlighted both positive and negative issues that they had with their military roles which highlights the additional responsibilities that military nurses may have. Coupled with this is
the nuance of rank versus experience. Some respondents also highlighted dilemmas with leadership and management. Ranks may be a contributing factor to these challenges, but this cannot be assumed from the data from part one of this study. Part two of the study is intended to explore these factors in more detail.

This study has prepared the foundation for the move onto part two of the study which will give the opportunity for the researcher to explore competence issues with military nurses in more depth.
Chapter Six

Part Two – Interviews and Qualitative Analysis

6.1. Introduction

This chapter will describe the stages of the qualitative data collection and analysis for part two of the study. The selection criteria for the participants will be discussed and the procedures and processes for this stage of the study will be described and will include the planning and conduct of the interviews as well as the methodology that was employed and the findings. The aims of part two of the study was to explore competence issues with military nurses in more depth by the use of semi-structured interviews.

6.2. Rationale for part two of the study

The findings of the data from part one of the study indicated that not all nurses going on deployment felt fully prepared for their role. Indeed, around 50 per cent of respondents indicated that they undertook tasks or roles that they were not trained for [see chapter five]. Free text boxes included in the questionnaire gave respondents the opportunity to describe the new tasks or roles that they encountered whilst on deployment. However, such responses were brief and did not give explicit detail of events or the context behind such experiences but raised interesting questions. For example where did these tasks take place and were they expected as part of their role on deployed operations? Of those nurses deployed, did they know what roles were expected of them and did they receive the relevant training to undertake these roles? Despite such limitations, it was apparent that there were concerns with nursing practice roles as well as those roles that were related to military duties. The new tasks or roles that were identified in part one of the study indicated the need for further research and it was decided to use a triangulation of both quantitative and qualitative methods [see chapter four]. Whilst the data in part one of the study illustrated the various
locations to which nurses were deployed [refer to chapter five], it was decided to focus the qualitative part of the study on those military nurses who had undertaken deployment duties in Iraq and Afghanistan for two reasons. Firstly, deployments to Iraq and Afghanistan have been undertaken recently and nurses are being deployed to these locations on a regular basis. Indeed, the conflict in Afghanistan is ongoing. Secondly, such a focus would mean that the nurses who have been on these deployments will share similar encounters regarding location and pre-deployment training but may not have had the opportunity to share knowledge with other practitioners once they have returned home. Moreover, the issues on deployment may not be apparent to those in senior positions in the military nursing hierarchy that can make a difference. The data collected and analysed in part one of the study using a grounded theory approach, provided a basis from which to support categories and hypotheses by using grounded theory to develop theory related to military nursing competence.

Part two of the study used a qualitative approach to explore issues of competence in more depth. A grounded theory methodology was also used for this part of the study [see chapter four]. It was decided to conduct initial interviews that would generate conceptual themes in order to identify factors for the identification of participants for further interviews.

6.3. Selection of participants for part two – qualitative interviews

It is important that the researcher demonstrates how participants for interview have been selected (Chiovitti & Piran 2003). The questionnaire sent out to military nurses in part one of this study asked participants if they would be willing to be interviewed. Out of the 285 questionnaires returned 211 individuals agreed to be interviewed and gave their contact details. As the methodology used for both parts of the study was grounded theory, albeit the data analysis in part one
of the study went as far as open coding, it was important to consider the theoretical underpinnings of this methodology when planning the interview strategy. Coyne (1997) states that ‘The central focus of grounded theory is the development of theory through constant comparative analysis of data gained from theoretical sampling’ (Coyne, 1997, p.625). Charmaz (2008) suggests that before theoretical sampling takes place, initial interviews can be carried out as a start point in the grounded theory research process.

Thomas and James (2006) remind researchers that the aim of grounded theory is to allow the theory to emerge from the data. As Parahoo (2009) suggests, the researcher using grounded theory should concentrate on collection of data that are relevant to the emerging hypothesis. The targeting of specific individuals or groups should be avoided (Parahoo 2009). Therefore, a pilot interview was carried out followed by subsequent interviews.

As this study involved military nurses who are serving in the Royal Navy, Army and Royal Air Force, it was decided, following the pilot interview, to interview a participant from each of the military services in the first instance. It was intended that these would contribute to the development of general codes which would enable identification of participants for further interviews. The participants would also need to fulfil the following criteria:

- They had been on deployed operations in Iraq or Afghanistan.
- They had indicated that they would be willing to be interviewed.
- They had identified that they did not feel fully competent in their role and/or
- They had undertaken a new task or role that they had not received training for.
The first four participants (including the pilot interviewee) represented a good cross section of the respondents. They represented the three military nursing services with a cross section of rank and nursing/military seniority. Three of the participants had undertaken duties in field hospitals, and one participant had undertaken a specialist role. All four of those initial interviewees had served in Iraq and one had served in Iraq and Afghanistan. The participants had completed their nurse training in the NHS before joining the military nursing services. However, the collective length and breadth of experience that the participants had before joining the military service varied from a few months to years. Some interesting codes were identified during the data analysis of the initial four interviews, but these were kept general for the reasons discussed earlier. More importantly, the researcher was mindful not to come to conclusions too early in the analysis. Nevertheless, it gave the opportunity to reflect and to ensure that the interview questions were relevant and yielded the appropriate responses for the study.

The next cohort of five participants were selected with the intention of building on codes identified in the first cohort of interviews with data that could be used to generate general themes by the utilisation of open coding. This was done by grouping all the questionnaires into groups that represented the three military services; Royal Navy, Army and Royal Air Force. Questionnaires were randomly selected out of these groups by the researcher with participants meeting the criteria as discussed above.

The subsequent five interviews were carried out with the participants being selected at random from across the cohort of volunteers. All interviews were held in the participant's place of work at a time convenient for the participant. The
researcher obtained the consent of the line or department manager to interview participants at their place of work although the participant's identities were not disclosed to protect the participant's confidentiality. Again, the researcher wore civilian clothes so as to reduce a barrier that may have been caused by the uniform. This was also thought to be good practice given that the researcher was senior to those in the interview cohort. All of the participants knew the rank of the researcher and his status as a senior nursing officer in the RAF.

All of the participants interviewed fulfilled different roles whilst on deployment. Table 6.1 gives the details of their rank, position and role on deployed operations. The details are purposefully brief to ensure anonymity of the participants.

<table>
<thead>
<tr>
<th>Participant No</th>
<th>Service</th>
<th>Status</th>
<th>Operational Role</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Army</td>
<td>Senior Nursing Officer</td>
<td>Management (field hospital)</td>
</tr>
<tr>
<td>2</td>
<td>Army</td>
<td>Junior Nursing Officer</td>
<td>Ward Based</td>
</tr>
<tr>
<td>3</td>
<td>RAF</td>
<td>Senior Staff Nurse</td>
<td>Air duties</td>
</tr>
<tr>
<td>4</td>
<td>Royal Navy</td>
<td>Senior Staff Nurse</td>
<td>Ward Duties/ITU</td>
</tr>
<tr>
<td>5</td>
<td>RAF</td>
<td>Junior Staff Nurse</td>
<td>Air Duties</td>
</tr>
<tr>
<td>6</td>
<td>Army</td>
<td>Junior Staff Nurse</td>
<td>Ward based/Specialist</td>
</tr>
<tr>
<td>7</td>
<td>RAF</td>
<td>Senior Staff Nurse</td>
<td>Ward Duties</td>
</tr>
<tr>
<td>8</td>
<td>RAF</td>
<td>Junior Staff Nurse</td>
<td>Ward Duties/ITU</td>
</tr>
</tbody>
</table>

3 Interviewed twice.
Table 6.1 - Interview Participants

The open codes that were derived from the first interviews were used as a basis for the selection of the participants. All the questionnaires were interrogated to find categories that were articulated by the participants that were similar to the open codes that were identified in the first cohort of participants. During the selection process for the subsequent interviews, all questionnaires were read and potential participants were chosen at random and not identified by rank, gender or service. However, only those who been deployed in Iraq and Afghanistan were chosen for the reasons described earlier. All of these participants had served in Iraq or Afghanistan or both in different roles. Three of the participants had undertaken nurse training as military student nurses the remaining participants had trained in the NHS.

The interview process is summarised at figure 6.1
Fig 6.1. The interview process

- Pilot Interview
  - Open Coding to generate concepts
  - Three interviews (randomly selected from the three services)
  - Open Coding to generate categories
- Five further interviews
- Three further interviews
  - Analysis continues - further interviews to confirm refine categories
6.4. The pilot interview

An individual contacted the researcher and asked if she could be interviewed as part of the study. Following perusal of the questionnaire that the participant submitted, it was decided that this volunteer would be an ideal candidate for the pilot interview. The participant was an experienced military nursing officer who had seen service in military and civilian hospitals. She had been deployed in a nursing management role in Iraq. In line with the grounded theory approach, it was hoped that this initial interview would give an overview and provide general categories which could be explored later on in the interview programme. It is important that processes and principles of data collection and analysis are articulated in the study, as not doing so may lead to criticism of the research process of the study (Coyne 1997). The researcher decided that he would wear civilian attire for the interviews as it was felt that wearing uniform may affect the interview process given the senior rank of the researcher. It was intended that the pilot interview would also give the opportunity to test recording equipment and also to check the relevancy of the questions that had been approved by the ethics committee (table 6.2). In addition, the pilot interview gave the opportunity to make sure that the Participant Information Sheet (appendix nine) and consent form (appendix ten), which had been approved by the MOD and University of Surrey ethic committees were understood an appropriate for the participant.

Following transcription and review of the pilot interview, it was apparent that there were themes identified that needed further clarification. Therefore, the participant agreed to a second interview so that some of the themes highlighted in the first interviewed could be explored in more depth. As the pilot interview yielded interesting and valuable themes, the researcher decided that it would be appropriate to use the data in the overall analysis of the findings of this part of the
study. Therefore, the themes were used as codes as the foundation for further data analysis.

**INTERVIEW QUESTIONS FOR SEMI-STRUCTURED INTERVIEWS**

1. Tell me about your experiences whilst you have been on deployment?
2. How did the experience feel?
3. How did your previous military nursing experience equip you for your deployment role?
4. How effective was your pre-deployment training in preparing you for your deployment?
5. Was you able to use the experiences that you had gained in your peacetime role on your deployment?
6. [for those who had worked in military hospitals] Can you tell me if your previous experiences in military hospitals were beneficial to your role on deployment?
7. How effective was your pre-registration training in equipping you with the nursing skills that you needed for your deployable role?
8. Tell me about any tasks or roles that you carried out on deployment for which you received no training?
9. How has your deployment experiences prepared you for future deployments?
10. How do you feel about deploying again?

| Table 6.2 | Semi-structured interview questions. |

**6.5. Subsequent interviews**

As already described, the interviews were planned to be semi-structured and it was intended that the questions would be used as prompts to use as necessary and also as aids to remind the researcher of some of the requirements necessary to answer the research question and to address the objectives of the study. Whilst it was acknowledged that the participant should be given the freedom to express their experiences, Britten (1995) suggests that no interview process can be totally unstructured. The researcher will always have some structure in mind.
before the interview process begins even though the study might refer to
interviews being totally unstructured. The questions were not seen to be
prescriptive as these qualitative interviews would aim to allow the participant to
give an in depth verbal account of their experiences (Streubert & Carpenter
this process as laddered questions and suggest that this strategy will help put the
participant at ease at the start of the interview. Before the interview took place
the participant’s completed questionnaire was reviewed to allow the researcher to
locate the biographical details of the participant and to enable a review of the
issues the participant raised in the questionnaire. Also, interrogation of the
questionnaire allowed the responses from the interview to be put into context with
regard to rank, experience and deployment history for example.

The consent and participant information sheet were discussed and sent to the
participants in advance, where possible, of the interview with an email explaining
that if there was any aspect of the participant information sheet or consent form
that was unclear, the participant should contact the researcher for clarification.

A date and time for interview was agreed with the participants and all participants
were interviewed at their place of work. All participants were happy with the
participant information leaflet and the consent form. Nevertheless, the outline of
the study was discussed before each interview commenced and the participants
were reminded that they could stop the interview at any time and withdraw from
the study at any stage in the future. The researcher explained to the participant
that the interview would take about one hour. However, given the nature of
qualitative interviews, the researcher was aware that participants should not be
under any pressure to finish their dialogue within any specified time frame (Britten
1995).
Corbin and Morse (2003) advise that interviewers need to be aware that participants may disclose sensitive information and they may want to discuss traumatic events. However, Drury et al (2007) propose that whilst interviews may be therapeutic they suggest that any interview is sensitive for the participant. This factor was considered in this study as participants would be describing their experiences on deployed military operations. The very nature of these deployments may have exposed the participants to incidents that they may have found traumatic. This was acknowledged in the study plan and the researcher knew how to access professional psychological support if this was required. In addition, Corbin and Morse (2003) suggest that the interviewer can move away from a particular question to alleviate distress if necessary. As part of the introduction to the interviews, the participant was reassured that her interview would be anonymised during transcription.

As the interviews progressed, the semi-structured interview questions were used as prompts during the interview rather than being a strict interview schedule of questions. Other questions were used to probe issues in more depth and to clarify any points that were revealed during the interview which is often necessary in qualitative interviews (Sorrell & Redmond 1995). All participants were able to give a detailed account of their experiences and the interviews ranged from 40 minutes to two hours. On completion of the interviews, all participants were asked if they would like a copy of the transcription. This offer, if accepted, would be one way of confirming accuracy of the interview (Holloway & Jefferson 2007). Also, it was acknowledged that the participant may want to change or delete some of the information that they had shared with the researcher. However, only one participant asked for a copy of the transcript. The other participants expressed an interest in finding out what the findings of the study would be.
All interviews were taped using a digital voice recorder and transcribed verbatim by the researcher. Transcription by the researcher enabled full engagement with the recording and afforded the possibility to identify concepts and potential codes at an early stage before detailed analysis took place. It was acknowledged that transcription would be time consuming and can normally take five to six hours per hour of speech (Bryman 2008) which was the case in this study. The option of employing an audio typist was considered, but it was felt that this would not allow full engagement with the data as discussed, and also that the accuracy of transcription could not be guaranteed (Bryman 2008). The clarity of the interviews was good which enabled easier transcription of the interviews. The interview transcription was then copied into the Qualitative Research Software (QRS) Nvivo 8.

Brief notes were also taken down during the interview which enabled the researcher to clarify points of interest and gave ‘life’ to the data once the interview was completed. Glaser (1978) endorses this as good practice and suggests that this will enable the researcher to recall issues and their relationships to codes more easily especially at the initial stages of data collection and analysis. The researcher also found that this aided the writing of memos during the transcription of interviews and the subsequent analysis of the data. The memos were written by hand as the Nvivo programme did not allow for more than one memo to be linked to more than one data source. The researcher used schematic diagrams and free texts as memos. Memos were used throughout this stage of the study and were written following interviews and during the analysis of the data. The researcher found the use of memos really beneficial. It enabled the researcher to capture thoughts and identify concepts. Examples of memos written by the researcher are included in appendices eleven and twelve. The researcher also kept a journal throughout the study. The journal enabled the
researcher to reflect on the study and also following data collection and supervision.

6.6. Data analysis

As discussed, the researcher used Nvivo 8 to analyse the data from the interviews. The researcher attended a workshop on Nvivo before the software was used as familiarity with the software was essential as the researcher had not used Nvivo before and wanted to ensure that the use of the software would provide reliable results (Davidson & Jacobs 2008). Whilst it is acknowledged that Nvivo has numerous applications, such as concept mapping and other complex analytical applications, it was decided to use it in its simplest form in the first instance to identify codes from the interview data. This was done by using the 'free nodes' application on Nvivo to act as a mechanism for open coding which is the initial part of the coding process used in grounded theory [see chapter four].

Following the transcription of the pilot interview, the identification of codes by using Nvivo was found to be somewhat easier. The initial coding using Nvivo also gave the opportunity to be more engaged with the data as the researcher had transcribed the data and then re-read the transcription in greater depth for coding purposes. Corbin and Strauss (2008) warn against the possible disadvantages of using computer software for the analysis of qualitative data. They suggest that the flair of the researcher in working with the data may be stifled and may make the interpretation of the data too mechanical. As the researcher transcribed the interviews, the possible negative aspects of using Nvivo was seen to be negated as the researcher was already engaged with the data before using Nvivo to code the data. Indeed, by using Nvivo the researcher reviewed the data carefully by using line by line coding. When coding, some researchers use 'in vivo' codes which is where a phrase used by the participant is
then used as label for a code (Charmaz 2008). Charmaz (2008), whilst identifying the merits of using 'in vivo' codes, warns that such coding may not be applicable to other participant's descriptions and more specific codes will need to be used when more detailed coding takes place. Therefore it could be argued that the use of 'in vivo' codes' could lead to forcing data into codes. Therefore, it was decided not to use 'in vivo' coding in the analysis of these interviews in this study particularly as the study population was diverse and the likelihood of 'in vivo' codes being relevant to other participant's descriptions was minimal.

The line-by-line coding enabled coding of all relevant data and meant that the researcher kept an open mind while coding, rather than scanning the data for particular themes. Line by line coding resulted in numerous codes being generated, but this was not a concern as such coding would lead to more focused coding later in the data collection and analysis Charmaz (2008). Indeed, Glaser (1978) supports Open Coding where the researcher identifies as many codes as possible in the data before embarking on more detailed theoretical sampling and subsequent coding. Corbin and Strauss (2008: 195) define Open Coding as 'breaking data apart and delineating concepts'. Fig 6.3 lists the codes identified in the open coding process.
6.7. **Open Coding**

Line by line coding of the interviews established codes which are shown in Table 6.3.

<table>
<thead>
<tr>
<th>OPEN CODE</th>
<th><strong>Description</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lack of experience</td>
</tr>
<tr>
<td>2</td>
<td>Competence</td>
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### Table 6.3. - Open Codes

Following the interpretation of the data from the subsequent five interviews, 47 codes were identified. The researcher did not look for commonality amongst the codes at this stage of the coding process, but was mindful that codes may be amalgamated into more macro codes following axial coding of the data.
The Nvivo 8 qualitative software identified how many interviews had the code being identified and also how many times the codes were referred to in the interviews. As discussed earlier, the title of the code was decided by the researcher by using key words in all the participants' statements rather than using 'in vivo' codes from individual interviews where the language of the participant is used to title the code. Whilst open coding using Nvivo demonstrated that some concepts that were related to the open codes occurred more frequently in some interviews than others, assumptions for core themes were not made at this early stage of data analysis.

6.8. Findings following open coding

The initial findings at this stage were comparable with the findings following the literature review that suggested that military nurses undertake duties and tasks that they are not prepared for or trained to undertake during war and conflict. Moreover, the findings from open coding confirmed and endorsed the findings following the interpretation of data in part one of the study where 50 percent or more of respondents identified that they had undertaken a new task or role on deployment. However, given the ethos of grounded theory where it is suggested that the researcher should not be influenced by possible similar findings from other studies, detailed comparisons with the findings and literature will be discussed later in the study (Glaser 1978, Charmaz 2008, Corbin & Strauss 2008).

It is interesting to note that issues relating to competence, nursing skills and previous experience occurred in all of the interview transcripts. For the purpose of this chapter, the first four open codes will be examined in further detail as they were referred to more frequently by the participants and thus coded more during the analysis of the data. It is acknowledged that all the codes were important to
each of the participants and these codes were addressed during axial coding. This means that as the coding system developed, relationships between the codes were explored and their links to phenomena using axial coding in the first instance was established wherever possible. The following open codes (lack of experience, pre-operational training, competence, nursing skills and military duties and rank), which contributed to categories later in the analysis process, were identified as being worthy of note at this stage in the study as they were referred to by all of the participants as described earlier.

6.8.1. Lack of experience

Lack of experience was mentioned in all of the interviews (n=9) and will be sub categorised in this section into gaining pre-deployment experience, specialist roles, being a military student nurse, experience in patient care and acknowledgement of experience.

Lack of experience was indicated in all the roles that military nurses undertook on operations, especially when the nurse was not undertaking these roles in their peacetime employment. The context of this code was also related to the role of the participant in the deployment. For example, the emphasis on lack of experience differed from a participant who was in a senior nurse management role compared with an individual who was in a practical nursing role. The participant who had a senior nurse management role was concerned about the lack of experience that some of her team had in relation to their role on deployment. The main issue this participant referred to was the lack of ward management experience that the nurses had who were required to run a ward in a field hospital. It was suggested that nurses being deployed were not always afforded the opportunity to undertake ward management roles before deployment and thus were not able to practice these skills in a peacetime setting. This is due
to the reluctance of NHS trusts to employ military nurses in management roles.

Participant 1 described these issues:

.... not one nurse who was the OIC (officer in charge) of a ward or department who [sic]had ever managed a ward before.....

.....within an MDHU at the moment their length of tours are only 2 years...usually...during that time you could expect them to deploy for anything from 3 to 6 months. There is no advantage to the host trust to invest in that individual to develop them managerially because they are not actually going to get the pay back, so although there maybe band 6 or band 7 development programmes, in reality they cannot access those programmes anyway because the time on the ground can't be guaranteed cos they're going to be out on ops....

[Participant one]

The move to Ministry of Defence Hospital Units (MDHU), was directed, as discussed in [chapter five], to ensure that Defence Medical Personnel would be afforded the opportunity to practice clinical skills that were not available to them in military hospitals but were deemed essential for roles on operational deployments. Competence in nursing skills will be discussed later, but it is worthy of note that it appears military nurses are not afforded nursing management experience that they may require when on military operations in some NHS Trusts. As military nurses can be deployed at short notice for long periods of time along with the associated pre-deployment training requirements, the reluctance of NHS Trusts to put military nurses in management roles can be appreciated. Informal discussion exploring the possibilities of putting two military nurses in one NHS nursing management post, so that the post would be filled at all times, have taken place but have not resulted in change at present [author's experience of this being discussed at military nurse management meetings].

The lack of experience in certain areas also had an effect the on other roles expected of the individual on deployment. For example, the simple logistical
exercise of ordering and returning drugs was given as an example by participant
one as an area for concern and it was felt that this was an integral role of the
ward manager in the field hospital. The ordering of drugs and other medical
materials in the peacetime setting will be different to such procedures on
operational deployments due to the different mechanisms of logistic ordering that
exists in the two organisations. Nurses were not aware of the intricacies of the
military medical logistic chain. Over ordering of supplies and not having the
knowledge to estimate requirements and indeed return unwanted drugs was
evident:

...On the wards, they had Zantac bottles with something like 120
Zantac bottles in each so every time they checked the drugs 240
Zantac were going...why? when did you last use it? Very few of
those patients...most of them are on IV or IM or they are out of
there...

[Participant one]

One could argue that the systems and processes should have been in place to
support the nurse in ordering supplies as such logistics would not be practised in
an NHS environment. Participant one explained how such processes were put
into place:

...So [we] got the morphine autojets removed, I used all the
governance processes to do that sort of thing. Why did they ever
need to get to the ward, why were they even entertaining having it
on the ward...

[Participant one]

Robust processes for ordering supplies would help all healthcare workers and
would prevent the over ordering of supplies. The standardisation of medical kits
such as emergency snatch bags is another way to support any healthcare
practitioner in their role. A participant explained how her team standardised the
items in kits when she was working on an emergency response helicopter:

...and there was things that we did that made it easier for everybody when we were there because there was several...there were 3 teams and 3 sets of kit [medical kit for aeromed use] and every bag was different so we made a point of making all of the bags the same...

[Participant three]

Such a simple process meant that nurses working on these helicopters would be able to locate equipment quickly in an emergency scenario and would mean that the nurses undertaking this duty would know what medical equipment was available to them when escorting patients.

Other participants alluded to their own lack of experience prior to deployment. For example, participant two described how he was deployed as a ward manager in a field hospital despite having very limited experience in this area of nursing. Coming from a primary care background, he had not had any experience in managing a ward and it had been some time since he had worked in a secondary care background:

...but in terms of the role I was going into which was actually to work on a medical ward....again didn’t feel particularly prepared..I had never worked on a medical ward post registration..

....I was going out as a 2IC [deputy ward manager] on the wards so to a certain extent I was going out with a sort of management and kind of leadership and organisational role as well as a clinical role....and I suppose I had the sense of in the way the attitude that I had developed is that the Army sends me there and they are sending me with what I have got and I have got make the best of what I have got, do the best I can...

[Participant three]

These comments endorse the concerns highlighted by participant one regarding the lack of leadership and management skills of her team.
6.8.2. Gaining pre-deployment experience

Whilst the participants acknowledged that they indeed had a skills deficit in skills such as venepuncture and connulation before deployment, they described how difficult it was to gain relevant experience prior to deployment or indeed consolidate training that had been undertaken despite the efforts of the individuals:

...had done my BATLS and BARTS [advanced resuscitation courses] ....which I thought was a great course...really well done but ultimately it is a 3 day course and there is no sort of consolidation or follow up on that...so you know ..that was an introduction so possibly gave me an idea of what I might have to face...

...what they did was put me into MAU (medical admissions unit) within an MDHU and with a view to getting me as prepared as possible but there were literally a few weeks to do it in.. you know a very short time...

[Participant two]

Indeed, the nurse's inability to gain experience prior to deployment is further restricted if the nurse is unaware what role that they will be fulfilling whilst on deployment. This may occur due to short notice deployments or just lack of information available. Participant three described the confusion regarding role and responsibilities prior to deployment:

...it was only 3 days before I was due to fly there that I learnt..not through the correct chains...that I was going to an IRT [Immediate response] role..

I had a phone call from a nursing colleague who was in theatre who contacted me directly to ask if I was going or not, because they knew that I had been nominated but they had not received any notification that I was actually taking up the position....so I
rang back theatre a matter of days before I was deployed... to be then told by this colleague, nursing colleague, that I was going to an IRT team.... over the phone...

[Participant three]

The lack of clarity regarding role expectation appears to be the result of a communication failure. The opportunity to access skills and enhance knowledge before deployment was also dependent on the peacetime workplace of the participant. Participant nine was employed in a rehabilitation unit before deployment where she was expected to care for patients in the air:

...the rehab unit isn't or wasn't a clinical environment to work in... so a lot of my job was based around admin and paperwork and things like that... whereas obviously when you are going out on aeromed you've actually got patients with clinical needs....

[Participant nine]

A participant highlighted the advantages of having a broad range and relevant experience prior to deployment:

... the acute medical ward... I thought was one of the better places to do that... because the [ward] co-ordinators role there is not a dissimilar job to AELO... receiving casualties... being referred and you're moving them on to appropriate levels of care and specialities and your taking phone calls about referrals... I was quite lucky with that job... I think it was an excellent experience... it was good experience for the staff who went and did field hospital roles because it was a very challenging area to work....

[Participant ten]

Another participant suggested that her competence to practice on deployed operations reflected her experience as a nurse and also her deployment experience:

... I felt very prepared... again it came with maturity and longevity in the military.... I don't think that any of the patients were beyond my capability but that is because of my background in A & E....

[Participant 11]
The opportunity to share knowledge and skills may be limited following deployments. A participant described how she used shared her knowledge and skills in a learning environment:

....I've managed [to help with training] so that's a good way of sharing your experience...

[Participant 12]

Whilst the military nurse may have an intention to update and gain the necessary skills prior to deployment, the host Trust's priority is not to enable specific nursing skills for deployment; these skills include caring for patients with needs that are relevant to their operational role such as trauma and the practice of nursing skills such as venepuncture and cannulation. There was also a general lack of recognition of the needs of the military nurse by civilian co-workers. Participant four voiced her concerns regarding the interest of her civilian colleagues in the work place:

...you come back to the NHS [following deployment] and they all think you have been on a nice holiday for the last 4 months... then they joke about it and then they actually do honestly think that we've been on holiday and that we have had an easy time out there and they have no idea that you are working every day, you are called in on your time off and you don't get any days off and generally you don't get much sleep because you can't sleep because it is very hot out there....

[Participant four]

Such a lack appreciation of the roles military nurses undertook on deployments even had an effect on the ability of the military nurse to undertake military training which was an essential pre-deployment requirement. Participant eight highlighted the barriers that she encountered prior to her deployment:

....They just don't seem to support us in what we do...we say we need military days here, we need something, they don't give it to us...there are issues with our annual leave, there is a lot of issues,
you know that they don't seem to understand and they don't seem to understand that we need to go on courses and we don't always get enough notice to give them...there is a lot of hassle, there just seems to be a battle all the time to get anything military..

[Participant eight]

As a senior nurse in the RAF, the researcher also encountered these issues when working within an NHS trust. At that time the war in Iraq was developing and military nurses were identified for deployment. A lot of negotiation was necessary to convince the general nurse managers that the military nurses had to be released to undertake pre-deployment training and also had to pick up their military kit. Their focus was clearly on staff resource management of their clinical areas even within an MDHU.

In addition, the focus of the NHS Trust where the researcher was employed, was to meet the needs of the NHS Trust and this often led to military nurses being moved to address staff deficiencies rather than ensuring that the military nurses were employed in the best place for military requirements. It was interesting that the moving of military nurses was predominantly at night and at public holidays due to the lack of permanent Trust staff. To address this issue the researcher did facilitate military awareness days for the civilian managers, but the interest seemed to be short lived.

6.8.3. Specialist roles

Lack of experience in specialised roles puts more demands on the nurse's emotions and their lack of ability to undergo or undertake pre-deployment training can have a negative emotional effect. Indeed, participant three was obviously very concerned over her lack of preparedness prior to deployment:

...it was more the lack of doing advanced...you know life support....I hadn't resussed anyone for years before I went out
there, and then I found myself having to regain those skills in the back of a helicopter...I wish I had...when I got back I did my advanced life support...I wish I had known that information before I went out there.....

[Participant three]

On some deployments, especially in the initial phase, there may be collective lack of experience within the nursing team that are deployed. Participant four alluded to this:

...people [other members of the team] had not actually deployed before there anyway. They might of been in the Service a lot longer than I had, but still have never deployed so we were all really in the same boat, whether we were new, or quite old to the Service...

[Participant four]

So whilst there may be a mix of nursing experience within the team, such experience may not be relevant to the military nursing role on deployment. The issue of deploying nurses who have recently qualified was highlighted by another participant. In this case the majority of the team who were deployed were all junior:

..I think it was a fairly exceptional case for my group because we were you know very inexperienced but that was fairly well recognised...

... we'd been sent straight out and there hadn't been a great amount of consolidation that we were, as a collective fairly inexperienced....essentially didn't really have any form of preparation....but I think that was because I qualified at a certain point and we deployed almost fairly rapidly....out to the desert in the January and there wasn't any time to do anything...

[Participant six]

This statement would suggest that the nurses were deployed to meet an operational need, not taking into account the experience that the nurse had. Indeed, there has been no system in place to ensure that the military nurse does have the necessary skills for the operational role. However, with the introduction
of the defence operational nursing competencies (2009, not in the public domain) and a rotation programme for newly qualified registered nurses, this should address this problem in the future. The defence operational nursing competencies and the rotation programme will be discussed in more detail later.

6.8.4 Being a military student nurse

This participant went on to explain that despite undertaking nurse training in the military, they (as a group of nursing students) were unaware of the roles that they would be expected to perform on deployment as this was never discussed in depth during student nurse training:

...lt was never sort of explained to us during our nurse training or during, the period of like when I transferred, the selection process what was going to be expected of us and what...even the set up of a field hospital, I did not know what one looked like...you know so when we got out there...

[Participant six]

This view was supported by another participant who explained that despite being a military student nurse, the emphasis was on registered general nurse training rather than the course having any military focus:

...there wasn't that much military...even though it was a military course, we weren't exposed to that much military really..I think it was nice to be in the military training school...

...but it was still focused on getting you through the nursing course and your nursing course it was still at university and even though we had the odd military lecturers they didn't go on about what it was like on tour....I think that could have been better...

...I remember having the odd talk about what it would be like or what you know what the odd person got up to on a tour in Iraq...

[Participant eight]

Therefore, it would appear that military student nurses do not have any advantage over other student nurses with regards to their preparedness for their
military nursing roles. This is interesting given that there are military nurse tutors from all three military nursing services employed in university where military student nurse training takes place.

These essential field skills are now articulated in the Defence Nursing Competencies and as such are now covered in pre-deployment training. These vignettes highlight military nurses' lack of experience and also lack of experience of other team members regarding what constitutes military nursing and military service experience. The rank held is not always indicative of this and adds further confusion with regards to the dynamics of the team. The issue of rank will be discussed later in this study.

Within nursing teams, a lack of essential knowledge and skills were addressed by team resource management in some cases. Such team management did ensure that the patient was cared for by a nurse with the appropriate skills if that were possible:

... we would quite often have to switch people round...we worked it out on a rota as to who would be flying next, but sometimes the people weren't experienced enough....

[Participant nine]

6.8.5. Experience in patient care

In all interviews, whilst the nurses articulated their concerns regarding their lack of experience, they acted in the best interest of the patients. This often meant extending their skills beyond their self-perceived competencies in the best interest of the patient. Some nurses were concerned over their abilities to practice on deployment:

...and it's not just knowing whether what you are doing is the best you could possibly do because you don't have that knowledge to back you up and as a nurse that is all you want to do, you just
want to do the best of your ability, which is what we do, but there is always better. If you had that knowledge of you know..

[Participant four]

Whilst the practice of team resource management was possible in some cases, this was not easy to facilitate especially if most of the team were junior and lacked skills. Participant seven highlighted the issue of team composition:

...but aeromed teams more and more are becoming 90 per cent first tour junior nurses and some of them are literally just off rotation and have been qualified a year and there is a real competence issue there...

[Participant seven]

It is apparent that whilst some military nurses may have completed a rotation program within an MDHU, they may have not been afforded the opportunity to consolidate their practice before deployment.

Despite the concerns raised by some participants regarding the lack of experience before deployment, some individuals did try to gain as much knowledge as they could before caring for patients on deployment. One participant who specialised in surgical nursing explained how she prepared to look after patient from other disciplines:

...my only thing is that I am a specialist surgical practitioner and when the flights came up that I had to cover, a couple of them ended up being severe medical patients....and I was again luckily I had the sense this time to take a couple of text books with me and I had my head in the books before flying...

[Participant seven]

Nurses on deployment have to accept that their patients will have different medical conditions that require different interventions and therefore a wide range of nursing skills will be required. This includes patients cared for in field hospitals and those being evacuated by road and air. In addition, nurses who undertake specialist roles such as intensive care may not have the specific skills to look
after the types of injuries seen on deployment such as polytrauma. These specialist nurses are normally employed in an MDHU in their peacetime role and as such, the patient groups that they care for after require different skills sets to those that they are expected to care for on deployment. For example, intensive care nurses will be deployed in an intensive care role within an NHS setting. The cohort of the patients being cared for in this environment will be dependent on the role of the ITU. Therefore, they could be employed in a small general ITU caring for patients following elective surgery or to a large regional unit which has the responsibility to care for acutely ill and trauma patients. For example during interview five, the participant explained that her peacetime role, which was in intensive care, had provided her with the basic skills to operate in her operational role. However, the participant explained that whilst they had the basic skills and competencies to carry out their role in a general intensive care unit, this did not equip her with the skills that they required to look after the patients that she would encounter on deployment:

...we do our ITU course which is great because you learn more there and it's actually having that experience of Afghanistan gives you that confidence and competence, but without it, it's almost like...you stay in one ITU, [say if you were staying here all the time] then you're comfortable with where you are, so if you don't know any different and you don't work anywhere else, then you are just comfortable where you are and you don't actually know what you don't know that you need to know....

[Participant four]

This concern was also articulated by another participant:

...here we don't even get young people half the time...to have a young person in the bed is quite a novelty, do you know what I mean...

[Participant eight]
It may not be possible to place a practitioner in a location that will give them the skills to look after some of the patients that they will be required to care for on military operations. For example the current conflict in Afghanistan has seen patients with severe polytrauma and burns caused by improvised explosive devices.

Such specific nursing skills will be discussed later but this is another example of how the lack of experience prior to deployed operations has an effect on the practitioner. The lack of experience that was expressed in the interviews was also related to the pre-operational training that military nurses had received prior to operations and the associated nursing skills that were required for the nurse to practice on deployed operations.

6.8.6. Acknowledgement of experience

Whilst the lack of experience has been discussed, the issue of recognising a practitioner's experience was also highlighted by participants. Lack of experience within the nursing team as a whole on deployment may then lead to inappropriate use of personnel on deployment. Participant four describes how this leads to a feeling of being undermined and how her own professional skills were not acknowledged:

...what I didn't like about it is that when we were there, we were just treated like student nurses and...as a junior rank you do feel like you are really the lowest of the low and you don't really get the respect...

[Participant four]

The recognition of skills and experience can also arise when a military nurse acts as a nurse in isolation within a team and conflict may arise when the other team members do not appreciate the skills that the practitioner has. Whilst this may cause frustration and conflict within the team it may also be daunting for the
practitioner. Participant six gave an example of this when he was working with a specialist team:

...no one pays any attention to corporal nurses. You know as a corporal nurse you, you...the rest of the world just sees you as a private anyway...what do you know...you are a corporal you couldn't possibly know anything about anything...

[Participant six]

Whilst the participant referred to his rank as an issue, which will be discussed later, his treatment as a registered nurse within a team did cause him concern:

...and got treated, and I say quite categorically now, almost like a leper, because you are a nurse, you work within secondary care. These people that I deployed with were at a particular medical regiment..

[Participant six]

This participant did, however, highlight the lack of military training and experience that he had received before deployment which could have been a precursor to these issues:

...It was never sort of explained to us during our nurse training or during, the period of like when I transferred, the selection process what was going to be expected of us and what...even the set up of a field hospital, I did not know what one looked like...you know so when we got out there and were getting barked at by Combat Medical Technicians, senior NCOs and Warrant Officers for building...we had to build a whole 200 bedded field hospital in under a week...

[Participant six]

6.8.7. Pre-operational training

Pre-operational training for military nurses is comprehensive and consists of a combination of both military and specific role preparation. For example, military nurses who will be undertaking nursing roles on helicopters will receive training on helicopters. Likewise, nurses undertaking roles in field hospitals will attend
training with a simulated field hospital known as HOSPEX training. The HOSPEX training is aimed at providing the military nurse and other healthcare professionals with familiarisation training in a simulated field hospital setting. The course runs over a four day period and as well as serving to provide the healthcare worker with environmental experience, clinical scenarios are used to enable the team, which is to be deployed, to work together. The HOSPEX is not a vehicle for providing training in specific skills such as the administration of intravenous drugs or equipment training. The nurses interviewed suggested that the value of HOSPEX was limited and did not really provide the experience that they felt they needed prior to deployment:

"...we do HOSPEX but I don't feel HOSPEX actually does help you in any way, and to be honest it's almost like until you get out there and experience....

...I have been on one HOSPEX and it didn't actually...I didn't feel it benefited me at all personally for going out to Afghanistan...it was just like a mock hospital in a big room....and it just, I don't know, I just didn't feel that it was very useful...."

[Participant four]

The participants acknowledged that the HOSPEX gave them the opportunity to meet with the other members of the team. This is important as military nurses often deploy as individuals that make up a team on deployment. The only exception to this would be the Territorial Army who deploy as a unit or those working in a field hospital in peacetime:

"...The only really useful thing I found about that [HOSPEX] was actually the opportunity to kind of meet up with colleagues that I was be going to be working with......"

[Participant two]

Yes...that is the only thing that is useful about HOSPEX I think is meeting who you are going to be going out with...and from that point of view ii is good...but from an exercise point of view...yes I think that is the main benefit of doing HOSPEX is meeting people..

[Participant four]
The usefulness of HOSPEX for team building and the lack of opportunities to practice clinical skills in this simulated environment was described by participant six:

"...like it is very good for the command element, the managerial elements and the emergency department and for people to sort of come together and to get to know each other for teams to be identified. Any, what shall we say personality differences to be identified so that it can be alleviated before you get out on the ground and clinically I think it is pretty limited..."

[Participant six]

There is an opportunity to change the learning experiences that are afforded to the individual on HOSPEX. Participant one described how she had noticed that nurses were not aware of the different warning alarms that were sounded on deployment. She thought that HOSPEX would be a good place for personnel to hear them and to be able to practice the relevant drills:

"...One of the things that I fed back as well which absolutely happens on HOSPEX now and I was quite pleased with my governance head on is...I sent a couple of them up to the tower and I said I want a copy of the...I want on a disc the siren noises...everything that they do on a daily basis which we hear 36 times a day and on HOSPEX now they always have an IED sound or incoming they always get the guys to put their kit on their body armour, their helmets, they have the sirens going in the middle..."

[Participant one]

Participant 6 also recognised the possibilities of enhancing training on HOSPEX:

"...I have a sort of identified that we had a fairly wide training deficiency for intensive care in particular as it is the only area I could have any influence over...both with equipment and processes and documentation and what is done at HOSPEX...."

[Participant six]

At the time of writing this study, the researcher is unaware of any significant changes that have been made to HOSPEX to investigate the training
opportunities that could be available on HOSPEX following feedback from post-
operational deployments reports.

Participants also suggested that they were not familiar with the medical and
nursing kits that they were expected to use whilst on deployment:

...we had infusers we had Leardal suction [a piece of medical
equipment for aspirating body cavities]....equipment for
example...but different Trusts had different piece of equipment...so
it was a rapid learning curve for a lot of these people...the specific
suction unit was specific, and the specific defib that we had...

[Participant three]

As well as working with unfamiliar pieces of equipment the participants expressed
their concerns over working in a unfamiliar environment. Normally used to
working in a NHS hospital setting, the environments that they had to work in on
operations provided different challenges. Indeed, some of the pre-operational
training did not take account of this. Participant two described her experiences
on working with patients inside helicopters:

.....So basic things like cannulation, yes we could do ABC.. but it is
very different to do your ABCDE [steps in resuscitation] in the
back of a noisy helicopter when you put your communication head
gear on and your body armour, weapons and your webbing belt
and equipment that.

[Participant three]

Despite belonging to the single military nursing services, military nurses work
alongside each other when caring for patients both in peacetime and during war
and conflict. For managers out on deployments, the effective use of manpower is
essential given the limited resources both in terms of personnel and logistics.
This requires more thought and organisation when small numbers of specialist
nurses are involved such as intensive care nurses. This will often mean that
some nurses, whilst they have the specialist nursing skills, may not have the
military nursing skills. Participant one explained her concerns regarding Army
nurses undertaking transfers by air. This duty would normally be undertaken by RAF nurses who had undertaken the relevant training:

"...We didn't prepare our guys to do that. You know they were not prepared for aircraft transfers the same way as our service... and that's wrong...."

[Participant one]

More importantly it cannot be assumed that a nurse from a particular military service will possess the specific military training for their role. One participant who was undertaking a specialist role referred to her lack of preparedness:

"...didn’t really account for aeromed in and out and certainly didn’t account for...didn’t give you any familiarisation with rotary wing aircraft or multiple weapons that sort of thing..."

[Participant three]

Whilst there were obvious flaws in pre-deployment training, one participant was actually disappointed that she was not working in the deployed environment that she had expected to work in:

".....whereas in the second time you just felt like I am going to work in the NHS every day [on deployment].....and it yes it was very different from the 1st to the second time but...mmm....I think I enjoyed the first time better because I felt that I was actually doing my job in a field hospital...."

[Participant four]

The nurses interviewed referred to failings in their pre-deployment training, which at face value are of concern. However, there is no evidence available that the patients were ever compromised. Participant three was concerned about the lack of skills she had but articulated some self reassurance:

".....they must have had some decent care to make it this far [to the rehabilitation centre]..."

[Participant three]
Participant three was very emotional during the interviews when she was reliving her experiences regarding her lack of experience and training for her operational role. The vignette above appeared to give her some self reassurance that she had not harmed a patient in her care, but she was also frustrated that gaining the relevant training and experience was out of her control. The findings from the research that had been conducted enabled the researcher to reassure this participant that she was not alone in her concerns about the lack of preparedness for nursing patients in the environment that she had been deployed in.

As discussed in the literature review [see chapter three] there are many facets that related to the notion of competence. It could be argued that the lack of experience and the issues with pre-deployment training are interlinked with the concept of competence.

6.8.8. Competence

During coding of data the subject of competence was referred to. The concept of competence was described by one individual:

...Competence [is]...when you feel completely happy and comfortable that you know what you are doing and that you know the basis behind what you are doing and that you feel comfortable looking after someone, that you will do a good job......basically knowing what you are doing at the end of the day and having knowledge behind you to be able to rationalise what you do...

[Participant four]

Other participants were asked for their views regarding what constituted competence. Participant seven highlighted the key elements that she would consider necessary to be competent:

...Well I would be happy that I have got the knowledge base and the practical skills to effect patient care positively...

[Participant seven]
Participant eight suggested that competence encompasses confidence and exposure to a particular task on a regular basis:

....I think having confidence in what you are doing and have done it enough times to feel confident in what you are doing and know, know values and parameters, things like that....

[Participant eight]

These elements of competence fit with the building blocks for competence that are described by Benner (Benner 1984) where competence is assured by frequent exposure to a particular nursing event. These concepts will be explored in greater detail later in this study.

Whilst there appears to be no agreement on the definition of competence (see chapter three), the researcher felt that the descriptions given by the participants provide a good insight on how competence may be perceived. Comments by the other participants highlighted some of the issues that related to competence. From a management perspective, it is of concern if some of a team do not have all the competencies to fulfil their role on deployment:

....you still had individuals that were nominated for those deployments who did not have the full competency package....

[Participant one]

Participant one referred to military nurses having to complete operational nursing competencies prior to being nominated for deployment.

.... the defence operational nursing competencies [are in place] now and I'm not saying that is a package that is complete ... I don't think it is, I think there is still a lot more work to be done, however, you still had individuals that were nominated for those deployments who did not have the full competency package. Now that come down to individual units nominating individuals against PIDS [operational posts], well, I can only go from my own experience recently at an MDHU. I wouldn't nominate someone for
deployment who wasn’t signed off for IVs competencies, that does not have their drug administration. Doesn’t have the core competencies…if we put the clock back 3 or 4 years that did happen across the piece. People got nominated…it was bums on seats...

[Participant one]

Whilst it can be seen from these comments that nurses may still be deployed without some of the core competencies (not in the public domain), the introduction of the Defence Operational Competencies is a move forward. More importantly, it gives nurse managers at MDHUs and other units a benchmark for training and can also act as an assessment tool to ensure that military nursing staff are deployed appropriately. The comment articulated by participant one above sums up how the introduction of the Defence Operational Nursing Competencies are seen, in her opinion, as a positive step. However, it is worthy of note that the Operational Nursing Competencies have only been written for nurses working in a field nursing environment. Operational nursing competencies have yet to be written for military nurses working on ships or in the air, both on fixed wing aircraft or helicopters. Nevertheless, the competencies that have been written do provide core competencies for all military nurses. However, it was apparent from the interviews that not all participants were aware that they were in existence or how they applied to them as practitioners. Only participant one appeared to be fully apprised of their existence and usage. One could surmise that the reason for this was that she was in a nursing executive role which involved handing and reviewing policy that applied to military nurses.

It is envisaged that this study will add to the Defence Operational Nursing Competencies and establish the relevancy of these competencies to the operational role of the military nurse.
During the interviews participants alluded to their responsibility in ensuring that they had the necessary competencies to look after their patients and the personal responsibility they accepted for this:

"...but ultimately you know I accept responsibility for being as competent as I can within my professional boundaries, but if they put me into something where I am completely beyond that, you know, I have to question how much responsibility I personally have to take on my own shoulders..."

[Participant two]

The time constraint factor in pre-deployment training had an effect on the value of such training and essential nursing skills were often not achieved:

"...in fact I started [training] it but actually I didn't fully complete it...because simply lack of time...although it was one of the things we were seeking to achieve...I did not achieve my full operational competencies in terms of IVs venepuncture, cannulation and so on......"

[Participant two]

One participant expressed how tasks were avoided or delegated to someone else if it was felt that they were more competent in doing a task. This was seen to be in the best interest of the patient:

"...cannulation venepuncture, because of the staff nurses around there was always people who were competent in doing it all the time and I thought it was better for the patient...whilst I felt sufficiently competent to do it...I felt it was better for the patient that those who were more in regular practice to do it...."

[Participant two]

Military nurses have to abide by the Nursing and Midwifery Code of Conduct (Nursing and Midwifery Council 2008d). One aspect of the Code is that nurses are required to acknowledge the boundaries of their competencies and are responsible for ensuring that they do not practice outside these boundaries unless they have received the appropriate training. On deployed operations, it has to be accepted that it will not always be possible to give the military nurse the
training to cover every eventuality. However, the issues of registration and competence were alluded to. This applied especially in the case when military nurses had to carry out specialised care such as paediatrics:

....[carrying out tasks that I had not be trained for]....made me feel quite vulnerable from a registration, nursing registration point of view cos I know that I am not competent to look after paediatrics, I know I have no knowledge at all....

[Participant four]

Paediatric skills were amongst some of the nursing skills that the participants felt that they should have prior to deployment. Despite lack of training and expertise, the participants were expected to care for these patients:

....you are taught in the civilian world that you should never do anything that you are not competent to do or you don't feel competent to do....but we were made to do things that we weren't competent to do like look after paediatrics....

[Participant four]

In addition to specialised skills, participants also referred to the lack of skills to carry out the basic tasks that were expected in their deployable role. Participant nine described her issues with her lack of experience in caring for patients in the air and the expectations of her in this role:

...Aeromed has this air about it that you are supposed to be you know this amazing person and you know, you are such a professional and this that and the other, but I didn't feel that I kind of met those standards when I was out there, I did my best but I you know...

[Participant nine]

It is evident that the participants interviewed perceived a need to be competent in their operational role, which is a clear commitment to their own professional standing as registered nurses and their acknowledgement of the NMC requirement for nurses to practice within their level of competence (Nursing and
Midwifery Council 2008c). It is evident from the data that certain nursing skills are required for military nurse competence and as such they should be competent in these skills before embarking on deployment.

6.8.9. Nursing skills

As discussed earlier, the MDHUs were established to ensure that military healthcare professionals were able to gain and practice the necessary practice skills for deployment. However, an assessment of whether this ambition has come to fruition has not been explored. It was evident from the interviews that military nurses lacked some skills that were necessary to be an effective part of the team on deployed operations such as cannulation and venepuncture. Whilst the researcher acknowledges that specialist nursing, such as paediatric and burns nursing have been amalgamated with this nursing skills group for ease of interpretation, certain nursing skills are deemed basic skills for the specialist practitioner in intensive care, these basic skills may not reflect the basic intensive care skills required in deployed intensive care units.

Participant one explained that they had carried out a small survey amongst the military nurses to determine how many military nurses on that deployment felt confident in giving intravenous (IV) medication:

....the result of the survey was that a 3rd of the personnel ....said that they were competent and confident and felt that they didn't require any further training and they tended to be theatre staff and ITU personnel and that is understandable...3rd said they were confident but it would do no harm to have an update which actually is the sort of thing that I would say...you know it never does is any any harm to have a bit...if you are not working in intensive care or wherever and doing it every day...but a 3rd said that they were not competent or confident....

[Participant one]

It is accepted that this survey was small scale and may not represent the military nursing cadre as a whole, the findings may suggest that a need for initial and
refresher training in certain skills may be required. The issue of intravenous cannulation was mentioned by other participants:

...I mean I was on a paediatric ward before I went there and I hadn't ever cannulated...I did not have cannulation skills....

[Participant three]

It could be argued that cannulation could be regarded as either a specialist or basic nursing skill and will be dependent on the role of the military nurse in peacetime. For example, military nurses working in an acute setting will use these skills, whereas nurses employed in the military rehabilitation unit will not be called on to cannulate patients routinely.

As alluded to earlier, looking after the needs of patients with certain injuries such as burns and poly trauma may require specialist nursing skills. Some of these patients would be cared for in a specialist unit if they were in a peacetime NHS setting. Despite wards being indentified for a specific speciality such a medicine or surgery, the military nurse may be expected to look after a mixed cohort of patients. Participant two described his experiences:

....what was supposed to be a medical ward turned into a you know a medical, surgical....we didn't have any gynae, but we had a pregnant woman at one time..paediatric of course....

[Participant two]

In a field hospital ward, there are a wide range of patients admitted including military patients contract staff, the local population and prisoners of war and whilst the clinical care of these patients may be the same, other factors may influence their care outcomes. For example, military patients will be repatriated to the UK if necessary, but the local population discharge to another care facility may be difficult due to lack of host nation support. The care of these patients will range from basic nursing to intensive care. Intensive care patients will normally
require ventilation, intensive medical support such as isotonic medication or haemofiltration. However, even for those who have specialist nursing training in a particular role such as intensive care, their training may not give them all the requisite skills and competencies that they require for their deployable role:

......I hadn't hardly looked after any ventilated and very sick adults let alone looking after paediatrics and I know that who I was working with had no paediatric experience at all or very limited....

[Participant four]

......like I think I looked after a guy who was really badly burnt. Now I've got no burns experience at all and again in my job here we don't get burns here, so again, I was looking after a burn....

[Participant four]

It is apparent that even the nurses working in specialist roles, such as intensive care, did not have the exposure to patients in peacetime to prepare them for the types of patients that they would have to care for on deployed operations. The clinical environments of the MDHUs did not always give the military nurse the opportunity to gain these skills:

......in a general ITU [where the participant was employed in her peacetime role] where you know your average clientele is a 90 year old with pneumonia then that's what doesn't really help....

[Participant four]

This issue was described by other participants who were interviewed. It is apparent that military nurses should be afforded the opportunity to gain experience on specialist units so that they can gain the skills that are required to care for the patients they encounter on deployment. The time spent on such placements will require careful analysis and as such is outside of the remit of this study.
This was acknowledged from a nursing management perspective by one of the participants who suggested that nurses should be afforded the opportunity to gain experience in specialist units before they are deployed:

....so I think there needs to be thought to the clinical pathway and does that mean that people go on a course and they get the opportunity to get to work at East Grinstead and they go to Chelmsford or Colchester....

[Participant one]

Participant one was referring to the specialised burns units, but the suitability of these units in relation to the appropriateness of the experience that they would offer would need to be assessed.

6.8.10. Military duties and rank

The issues and dilemmas regarding military rank and military duties were referred to during the interviews and whilst nursing competence is a key theme in this study, the associated roles and responsibilities expected from military nurses need to be acknowledged. Whilst comments regarding such aspects of the military nurse's role did not feature highly in coding frequency, they appeared to have an impact on both preparation before deployment and on their performance whilst on deployment.

Despite being non combatant, military nurses have military duties to perform. For example, under the Geneva Convention (ICRC 1997), military medical personnel are authorised to bear arms in order to protect themselves, their patients and medical facilities. The need for such protection is essential and this requirement is recognised by the author. The experience of the author would suggest that some non military personnel would be surprised that medical personnel carry weapons, but in the face of danger, carrying weapons gives a sense of safety. Even military personnel may not be aware of the requirement or reason for
military medical personnel to carry weapons. Participant six described his frustrations about the allocation of weapons and ammunition:

...I experienced on a number of occasions... alright you're a nurse you couldn't possibly know anything... from a military perspective... you just got to work and leave the army stuff to the rest of us... and so what we had was a group of TA infantry who provided security... it was rather comical because throughout the Unit you only had something like 10 weapons... we were formed to do guard duty with no rounds... so you had no rounds for your weapon so you were just handed a weapon which belonged to someone else, it was like something from the Boer war...

[Participant six]

It was apparent when interviewing participant six that the requirement for medical personnel to undertake duties such as guard duty was not an issue. The issue was that if they were expected to undertake these roles they should have been afforded the appropriate equipment. Participant six also referred to medical personnel having to share weapons. Normally, weapons are issued to individuals and whilst they are secured in an armoury when not in use, they remain the property of that individual.

Other military duties did give concern to other participants. Whilst nursing is the primary role for military nurses who go on deployment, they will have to carry out other military duties. Participant eight referred to the issues of undertaking the role of deputy guard commander:

....the most military thing we did which was a big learning curve actually, was guard protection and being a corporal we were expected to be... 2 IC [deputy] guard commander ....

[Participant eight]

This participant also alluded to an incident where she had to exercise military discipline:

...he was Army actually, he was an army private and he refused to go on guard and so I had to charge him in the end; we had to go through the process of charging somebody which is something I hadn't been exposed to before and it was a big learning curve
because we just don’t get exposure to that kind of military experience here.....

[Participant eight]

Military nurses working within most MDHUs are not required to carry out such military duties in their peacetime role. On deployed operations, military nurses are expected to carry out such duties. The nature of such duties will be commensurate with rank. As discussed in the literature review, military nurses attain the rank of corporal on registration and officer status if they are commissioned on entry into the service or successful for selection for a commission if they are already serving as a non commissioned nurse. With rank comes certain expectations with regards to the individual’s military responsibility. Participant eight talked about her responsibilities for enforcing military discipline when acting as a deputy guard commander. Other participants referred to their rank and associated expectations. Participant nine described her experience of been awarded acting rank whilst on deployment:

...especially getting the acting sergeant, people do look to you for support, guidance, information, advice and everything...

[Participant nine]

Acting rank is one rank above the rank that the individual holds. It is normally given when there is a need for such a rank to be present in the workplace. The individual nominated must have had a positive promotion recommendation in their annual reports to be awarded acting rank. However, the individual may not have attended the military leadership and management training that an individual is normally expected to have completed before the rank is substantiated. Listening to participant nine she did not feel prepared for this rank and it did appear to cause some conflict within other members of the team:

...but it was quite pressured and I think it got some peoples backs up on the team as well [in what way] ...There was another girl who came at the same time as me who was I think was qualified a little
bit, I think, qualified about six months longer than I had been and she had been in a clinical environment since qualifying and she didn’t really like the fact that I come from a rehab unit and didn’t have the clinical knowledge...and [I] got the acting sergeant above her so...

[Participant nine]

Whilst participant nine appeared to be proud to have been awarded the acting rank, it did cause added pressure.

As discussed, rank does not always indicate the level of nursing experience that an individual may have. Those put into leadership and management roles by virtue of their rank may not always be credible in the workplace. This was apparent during the interviews:

....on my particular shift we did have someone who was fairly senior but had been out of nursing for so long that it was left to other individuals on the shift to take the lead...because there is often this mismatch between...you know new people and those who are very senior and you know who are effectively department managers, there are no middle element a lot of the time..

[Participant six]

This participant had discussed how the team that he was working with were junior, yet the manager, despite being senior in military rank, was not credible due to lack of clinical skills and experience. Progressing up the career ladder in military nursing often means that the practitioner moves away from clinical nursing into a variety of management roles. Such roles may not involve working with practitioners. Rank may also cause tension when the skills and abilities of a subordinate nurse are not recognised.

Participant five describes one such incident. He was managing the loading of patients onto an aeromed flight. The AELO and the CCSAT team leader were both nursing officers:
...afterwards I was given everyone the thumbs up thinking that was a really good job, but then later that day, I got approached by my boss, the AELO, and she said that CCAST had actually sort of gone to spoke to her and said I didn't ...that we had done a bad job and said, I think she said that I did not look as though I know what I was doing and it was all a bit of a shambles...which I sort of, I thought, I got a bit disheartened by it...

[Participant five]

Participant five felt proud that he had managed the team and the loading well and felt undervalued when he was told otherwise.

6.9. Discussion

This chapter has described some pertinent open codes that were highlighted during the qualitative interviews. The practice of open coding identifies concepts, but these concepts are not mature at this stage. The relationships between the codes will be identified through axial coding. The first five open codes were chosen to be explored in depth at this stage of the study as they were referred to more frequently by participants. Axial coding will enable all codes from the open coding analysis to be related to a phenomenon. It was evident that the issues of rank and military duties, whilst not associated with nursing competence, were relevant to the concept of military nurse competence on deployment. Therefore, the researcher decided to include these contributing factors in this study.

The participants gave an interesting account of their experiences and are representative across the three military nursing services and include personnel at different stages of their career who also hold different ranks, that is a mix of commissioned officers and junior ranks. They all came from different backgrounds with different experiences and specialist training. For example, the cohort of participants ranged from a participant working in a management role to those working on a ward in a field hospital and those who were undertaking a specialist nursing role. Whilst it could be argued that comparison due to differing
roles of military nurses may be difficult, common codes were found following data analysis of all of the interviews.

Participant one, who was a senior nurse, had only been on one deployment and was able to use her experience to the full on deployment. During the interview she did not articulate any personal training deficits but was concerned about the preparation of other members of the team. Therefore, one could surmise that her portfolio of nursing and management experience was transferable from a peacetime to operational setting and such experience enabled her to feel comfortable in her practice and indeed enabled her to be innovative in ensuring that issues were highlighted and acted upon. For example, she helped conduct a small scale study to identify the competence of nurses in the administration of intravenous medication. In addition, she recognised that not all nurses were aware of all the meaning of the warning sirens that sounded from time to time. This led to healthcare staff having training in this aspect before deployment. Therefore, Benner would suggest that this practitioner is practicing at an expert level (Benner 1984, Benner 2000) as is it apparent that that the practitioner utilises innovation in practice and also guides others in their own practice.

All but one of the participants identified areas that they felt that they had skills deficits before they went on deployment. These ranged from specific nursing skills, such as the administration of intravenous drugs to the skills required for nursing a specialised group of patients such as burns and paediatric patients. As professionals they were able to acknowledge these skills deficits and identify where experience was lacking. However, concerns over breaching of professional boundaries were alluded to in relation to their roles which they felt breached their ability to adhere to the NMC Code. The Code requires that nurses only practice in areas where they have the requisite skills and competencies (Nursing and Midwifery Council 2008c). It is questionable that the nurses that
took part in the study were afforded the relevant pre-deployment experience in their peacetime role but they were aware of their professional boundaries. It could be assumed that military nurses who are employed in peacetime roles such as elective orthopaedics will not have the comprehensive grounding to care for patients that they might encounter on deployment. The cohort of patients they see on deployment may include children and patients who have suffered severe trauma. However, the prime focus of their activities is the care and welfare of the patient.

The closure of military hospitals and the move to military nurses working in MDHUs provides nurses with clinical experience that was not available in military hospitals such as acute care. However, given the experiences of these participants it would seem that there is a mismatch between their MDHU experiences and the experiences required for their operational role such as undertaking roles such as venepuncture and caring for particular patient groups such as burns and paediatrics. One participant referred to the fact that her duties in a peacetime intensive care did not compare with those duties required on deployment as she looked after a different cohort of patients in each environment. The skills required to care for seriously ill trauma patients were not the same as looking after elderly and mostly medical patients. However, it appears that some skills deficits have been identified with the introduction of the simulated filed hospital (HOSPEX) and the Operational Nursing Competences.

Whilst the concept of the HOSPEX was recognised by the participants as appropriate, its worth in preparing them for deployment was questioned. The main value appears to be to give the opportunity for the team to meet before deploying. One could argue that the HOSPEX concept is not to identify and rectify skills deficits as this should be in the remit of the MDHU, but it may have
potential to provide nurses with some of the extra skills that they require for deployment but this will be discussed later.

It is too early to say if the introduction of the Defence Operational Nursing Competences will have an effect on ensuring that the nursing skills set required for deployment are met before the individual is deployed. It is envisaged that nurses will not be deployed until they have achieved the core nursing competencies that have been identified as essential. As many of the nursing skills required for deployment will not be able to be achieved or even practised in the current MDHUs, such as burns and paediatrics, nurses may have to undertake placements at other hospitals. This has not yet been factored in to any training strategy, but would seem to be essential in order for nurses to feel confident and competent in their deployable role. These will be discussed in more depth in the recommendations following this study.

In addition to nursing competence, the issue of military skills have already been alluded to. Again, MDHUs do not always afford the military nurse with the opportunities to practice their military duties. Whilst these duties will be taught on initial and subsequent promotion training courses, the military nurses interviewed discussed some of the issues they face with regards to the lack of experience in their military role. Military rank can be seen from both a positive and negative angle. Whilst rank may demonstrate an individual’s seniority in the military nursing cadres, such rank is not always congruent with the individual having the necessary professional skills and competencies to carry out a particular role. In contrast, those nursing who are junior in rank may not be afforded the recognition they should receive. As discussed, promotion is awarded following the review of annual appraisals. The appraisals are focused on military teamwork, management and leadership and as such gives a limited opportunity for clinical performance to be taken into account. Also, the opportunity for promotion after
corporal in the junior ranks and flight lieutenant in the officer cadre will be
dependent on vacancies that exist. It is also worth noting that the panel of three
that make up the panel on the promotion board consists of two non nurses.
Therefore, it will be the remit of the specialist member on the promotion board
who is normally a nurse, to elucidate the role and experience of the military nurse
and how this may relate to promotion.

6.10. The way forward

The interpretation of the data following the interviews has been enlightening. The
researcher acknowledges that the list of codes that have been identified at this
stage of the data analysis are numerous, but whilst the relationship between
these codes at this stage could be possibly identified at this stage, these
relationships were examined later in the study. Further data analysis may provide
the opportunity for amalgamation of some themes that have been found at this
stage.

Some of the concepts which were identified at this stage of the study are
congruent with the findings of part one of the study where over 50 percent of
respondents indicated that they had undertaken new tasks or roles on
deployment. These duties included nursing and associated military duties. It is
important that the data from part one of the study are taken into account. Whilst
grounded theory is a deemed to be a qualitative methodology, there is no
suggestion that data cannot be used from another sources such as a quantitative
method (Glaser & Strauss 1967). Indeed, Glaser and Strauss advocate the use
of triangulation as it gives the researcher the opportunity to interpret data from
different perspective (Glaser & Strauss 1967). Also, whilst there are obvious
links to the literature that has been discussed in the literature review, these links
will not be explored until the interview data have been analysed further.
The next stage of the analysis involved a deeper exploration of the underlying concepts of the codes that have emerged from part two of the study by axial coding and then selective coding. The codes that were highlighted from the initial open coding were interrogated and mapped, where possible to core codes. This enabled possible theories to emerge from the data and form the core category as the basis for the theory identified in this study.

6.11. The story so far

Strauss and Corbin (1990) recommend that in grounded theory the researcher writes a story as part of the coding process. A story enables the researcher to gather their thoughts and reflect on the findings of the study as part of the data analysis process. The researcher found this very useful and the exercise proved to be invaluable for the preparation for the next stage of data analysis especially as there were data from both the quantitative and qualitative parts of the study that needed to be considered. Strauss and Corbin (1990) suggest that whilst writing the story, the researcher asks the following:

- ‘What about this area of study seems most striking?’
- What do I [the researcher] think is the main problem?’

(Strauss and Corbin 1990 119).

The story so far is that military nurses employed by the DMS provide nursing support to military operations. In their peacetime role, the majority of military nurses are either employed as part of a primary health care team in military medical centres or as secondary care nurses who are employed in MDHUs that are embed within NHS Trusts. Despite working in primary or secondary care roles in peacetime, military nurses may be employed in a variety of nursing roles
on deployment. For example, nurses working in primary care in peacetime may be required to work in a field hospital on deployment and vice versa.

For secondary care nurses, it is intended that their peacetime role working in MDHUs will give them exposure to clinical experience that they may require in their deployable role. Benner (1982b) suggests that clinical experience is vital for a nurse to develop in their proficiency and move from a novice to an expert practitioner. As part of this process the nurse passes through various stages of proficiency which include novice, advanced beginner, competent, proficient and finally expert practitioner. The transition through these stages of proficiency is dependent on the time the practitioner is exposed to a particular clinical situation (Benner 1982a, Benner & Tanner 1987). For example Benner proposes that a nurse will reach the level of a competent practitioner when they have ‘...been on the job [for] two to three years’ (Benner 1982a: 404) and as such will be able to assess the long term implications of their practice. The practitioner will also be able to manage the nuances of various clinical situations and use pattern recognition to react to a particular situation. Benner describes the skills and qualities of the expert practitioner which include the ability to practice without the strict adherence to guidelines and protocols and the ability to draw on a portfolio of experience to speedily assess and react to given care situations. Therefore, Benner’s theory is that the route to expert practice is that of attaining skills and practice experience in a specific clinical area over a long period of time.

How does Benner’s theory apply to military nurses? Findings from both the survey and interviews in this study suggest that military nurses may not be given the appropriate clinical exposure to equip them with all the knowledge skills and experience for them to practice competently and confidently in some of the roles expected of them on deployment. These roles include both clinical and military
roles. It is acknowledged that some of the patients seen on operations sustain injuries that will not be seen in any peacetime setting in which military nurses work, for example those sustaining major trauma caused by improvised explosive devices. However, some nurses did not possess some basic clinical skills that were required to look after the majority of patients such and these skills could have been obtained in their peacetime roles. Examples of such skills included procedures such as venepuncture and the care of specific groups of patients such as paediatrics and burns.

Given the demands of some of the patients seen on deployed operations, Benner's concept of developing proficiency may also be dependent on other factors. Therefore, it could be argued that if Benner's concept did apply, military nurses may take longer to move from novice to expert practitioner given that their practice is made up of short periods of deployments and changes in their peacetime roles due to postings, which may occur every two years as well as the turbulence caused by intermittent deployments of four to six months duration. Moreover, it may not be possible to provide pre-deployment experience for all eventualities that the military nurse may encounter on deployment. For example, participants described how they cared for patients suffering from diarrhoea and vomiting in the early stages of the Iraq war which were less challenging compared to dealing with patients suffering from multiple trauma both in Iraq and Afghanistan. The nature of injuries sustained will reflect the nature of weapons that the enemy forces use. Therefore, the clinical scenario will be forever changing.

The DNS has recognised that there is a requirement for military nurses to undertake additional specialist nurse training in order to undertake specialist roles. The International Council of Nurses defines nursing specialisation as '...a
level of knowledge and skill in a particular aspect of nursing which is greater than
that acquired during the course of basic nursing education' (International Council
of Nurses 1987: 5). Such specialist training that military nurses undergo includes
intensive care and emergency nursing. This training may involve accessing
higher education courses where the practical course objectives are achieved in
an NHS setting. Successful completion of the course will equip the nurse with
the skills to work, for example, in an intensive care unit in the NHS. However,
such specialist training may not necessarily provide the practitioner with the
competencies to look after some of the patients in their charge when on
deployment. Notable examples described by participants in this study were the
care of paediatrics and burns patients in the intensive care setting.

Military nurses who took part in this study acknowledged their lack of some core
skills that are necessary for them to effectively undertake their role on
deployment. They described how they compensated for this by reading literature,
using team resource management and by just getting on with the job. Clark
(2005) (see chapter 3) describes how a partnership pedagogical model promotes
effective learning and this would appear to apply to military nurses as they
described learning from others in the team.

Military rank may have a negative effective on team dynamics and learning where
either the experience of the nurse may not be recognised due to them being
subordinate in rank. Or, conversely, seniority in rank may not represent a true
reflection of the clinical prowess of an individual. Experience gained on
deployment was shown to be a precursor for military nurses feeling better
prepared for future deployment and without exception, the nurses interviewed
said that they would be happy to deploy again.
As discussed, military nurses also hold a military rank which is a reflection of their status within the military services. This issue was found to be a doubled edged sword presenting challenges to some. For example, nurses felt that rank did not always reflect their knowledge and skills appropriately and this often resulted in lack of respect by other military personnel. However, with rank seniority came expectations by others. The combination of being a nurse and being part of the military was not respected by some.

Linked with rank was the issue of management and leadership skills. Again, peacetime experience did not always provide the leadership and management skills that were required in the military nurses role on deployment. NHS Trusts are reluctant to place military nurses in management position due to the turbulent nature of their military role as discussed earlier. Participants in this study also felt that their NHS colleagues did not demonstrate an awareness of the complexity of their military nursing role and it was felt that the requirement to fulfil the needs of the NHS Trust were often deemed more important.

The DNS have acknowledged that there is an issue with nursing competence on deployed operations. In response to this, the Defence Operational Nursing Competencies were launched in 2009 with the intention that no military nurse would be deployed until they are competent in the core competencies deemed necessary for deployment. However, not all competencies within this framework are achievable in the peacetime setting and where such competencies will be achieved has yet to be decided.
This synopsis has paved the way forward for the axial coding of the data. This process will be undertaken by using the paradigm model (see chapter four). The phenomenon identified for this process are as follows:

- Competence to practice nursing on deployed operations.
- Supporting patients with specialist nursing needs.
- Using the Defence Operational Nursing Competences.
- The military rank dilemma.

The main issues identified are that military nurses have unique roles and responsibilities. Unlike their colleagues who work in the NHS, military nurses are responsible for caring for patients who often have unique needs. They also have to work within a military hierarchical structure that itself has expectations. The expectations of the patient, the military services and the practitioner need to be acknowledged. Therefore, competence to undertake military nursing roles on deployment will need to encompass all of these factors. Following analysis of the data so far, it is debatable if the current peacetime clinical environment in which military nurses are employed provides the experience that they require to function effectively in their deployable role. The nurses taking part in this study suggested that this issue is not insurmountable and as such could be achieved. The introduction of the Defence Operational Nursing Competencies may provide a framework for the military nurses clinical in ensuring that they deploy with the requisite skills. However, the successful achievement of these competencies has yet to be audited. Whilst these competencies are not in the public domain, it is apparent that many of these competencies will not be achievable unless a route is identified.
6.12. Axial Coding

Following open coding, the next stage of the data analysis was axial coding. Axial coding follows on from open coding with the intention of forming relationships between codes that had been identified in the open coding process (Strauss & Corbin 1990). The paradigm model described by Strauss & Corbin was used to facilitate this process, a schematic diagram is at figure 6.2. The model identifies and facilitates the steps involved in axial coding by describing the phenomenon and its relationship with other concepts as follows:

Causal conditions. The causal conditions that led to the phenomenon are identified at this stage.

Phenomenon. The phenomenon is the main concept or issue identified from the data. In this study the phenomenon was identified from the open codes that emerged from the open coding process.

Context. The context describes the properties that relate to the event. Strauss and Corbin describe context as ‘...the location of events or incidents pertaining to a phenomenon along a dimensional range’ (Strauss and Corbin 1990:101).

Intervening conditions. Intervening conditions describe the facets that have an effect on the action/interactional strategies.

Actional/Interactional. The action/interactional aspect of the paradigm model refer to the response the the particular phenomenon. Strauss and Corbin (1990) describe this aspect as having two distinct properties. Firstly, this aspect may be a component of a process and as such may alter and develop over a period of time. Secondly, it may be done for some particular reason.
This paradigm model (fig 6.2) was used to explore the categories that were chosen following the open coding of the data derived from part two of the study:

- Competence to practice nursing on deployed operations.
- Supporting patients with specialist nursing needs.
- Using the Defence Operational Nursing Competencies.
- The military rank dilemma.
Fig 6.2. - Paradigm Model

Causal Conditions

Context

Phenomena

Intervening Conditions

Action/Interaction Strategies

Consequences

Causal conditions: Nurses are employed in the DMS to support operations around the world. When they are not deployed in operations, they are employed in a peacekeeping setting, in emergency or secondary care, with the intention of ensuring that nurses have the necessary competencies to undertake their operations. Nurses are often faced with a variety of challenges, including the environment, support operations, emergency care, and more. Phenomena: The phenomenon was identified after gathering the codes that were identified in the open coding process as described earlier. These codes included previous experience, building on deployment experiences, pre-registration consolidation, flexibility, sharing experiences, continuity, good preparation, camaraderie, deploying agency, author, mobilising on operations, and more. The environment, support operations, emergency care, and more are factors that influence the phenomena.
6.12.1. Competence to practice on deployed operations

The paradigm model (fig 6.3) illustrates the axial coding process for the competence to practice nursing on deployed operations category which was identified as the phenomenon for this example. The factors related to this model are as follows:

*Causal conditions.* Nurses are employed in the DMS to support military operations around the world. When they are not deployed in this role they are employed in a peacetime setting, in either primary or secondary care, with the intention of ensuring that they have the skills and competencies to undertake their operational role.

*The Phenomenon.* The phenomenon was identified after careful scrutiny of the codes that were identified in the open coding process as described earlier. These codes included competence, pre-operational training, nursing skills, peacetime preparation, the team, advantage of previous experience, building on deployment experience, post-registration consolidation, flexibility, sharing experiences, continuity, good preparation camaraderie, deploying again, support for each other, emotions on operations, Prisoners of War, danger on operations, the environment, support on operations, enjoyment, resources, culture, coping, experience in military hospitals, the unknown, pain, autonomy, safety, emotions and tiredness.

*Context.* Military nurses are employed in numerous roles when they are deployed. For example, they could be employed in a field hospital or an area of specialist practice such as intensive care, aeromedical evacuation
or autonomous roles which provide nursing support for specialist teams such as in support of troops on patrol

Intervening conditions. The intervening conditions relating to this phenomenon relate the effectiveness of the military nurse in their deployable role. Such effectiveness will be dependent on the preparation the nurse has undertaken prior to deployment. The data from this study suggest that military nurses often undertake nursing roles on deployment that they have not received training for. Nurses described not being able to carry out procedures such as venepuncture and cannulation which are considered basic yet essential skills in the operational clinical environment. Moreover, to enable practice, logistics and supplies have to be in place. Both junior and senior staff interviewed articulated issues regarding this. Working in MDHUs does not allow nurses to become familiar with ordering routines that take place in the military environment. Whilst procedures were often put into place to address these issues, the turbulence caused by frequent deployments with a resulting change of staff led to a lack of corporate knowledge in the deployed team.

Nurses felt better prepared if they had worked in an environment where they were able to practise these basic skills. In the case of the more junior nurses, some undertook clinical rotation prior to deployment to give them a good general nursing foundation. Nevertheless, they were often not given the chance to practise skills. For example, NHS Trusts often employed phlebotomists to carry out venepuncture. Whilst this is seen as a valuable resource for the Trust it limits the ability of the military nurse to gain this experience. When they go out on deployment they will be expected to carry out this task as the DMS do not employ phlebotomists.
Therefore, clinical rotation for military nurses needs to include realistic and relevant objectives for the experience to be optimally effective.

*Actional/Interactional.* Nurses often look to other colleagues to carry out a particular skill if they did not possess the skills themselves. Whilst it could be argued that this is good team working, nurses felt frustrated at not being able to carry out the procedure themselves such as venepuncture and cannulation. There was no evidence that procedures were not undertaken and care compromised because of the lack of these skills.

Some nurses where able to access training on deployment or update skills that they had not practised for some time but this was dependent on the personnel available in the deployed clinical setting. Nurses also accessed further training when they returned home and before they went on subsequent deployments.

*Consequence.* Because of the flexibility of the team, the patient was given appropriate care. Nurses felt more prepared the more deployments they did. However, as nurses came from different locations to make up deployable teams, the ability for them to reflect and share experiences on their return was not achievable as they normally returned as singletons to their peacetime role.

Factors relating to competence to practice on deployed operations were related to general nursing practice. Nurses in part two of the study also reported issues with specialist practice. By specialist practice the author is referring to those patients who require specialist intervention and would, if they were in the NHS,
be treated in specialist units such as intensive care or burns. In addition, this category also refers to looking after patients who nurses are not trained to care for in their registered general nurse (adult) training such as children and pregnant women.
Fig 6.3 - Paradigm Model – Competence to Practice on Deployed Operations

Relevant Codes

- Competence
- Pre-operational training
- Nursing skills
- Peacetime preparation
- The team
- Advantage of previous experience
- Building on deployment experience
- Post-registration consolidation
- Flexibility
- Sharing experiences
- Continuity
- Good preparation
- Camaraderie
- Deploying Again
- Support for each other
- Emotions on operations
- Prisoners of War
- Danger on operations
- Environment
- Support on operations
- Enjoyable
- Resources
- Culture
- Coping
- Experience in Military Hospitals
- The Unknown
- Pain
- Autonomy
- Safety
- Emotions
- Tiredness

Peacetime nursing role to operational nursing role

Nursing in a new environment on deployment

Compentence to practice nursing on deployed operations

- Pre deployment training.
- Nursing experience

Patient receives optimum care possible in a deployed medical facility

- Care for patient/accept role.
- Delegate to other team member.
6.12.2. Supporting patients with specialist nursing needs

The paradigm model (Fig 6.4) illustrates the axial coding process for the supporting patients with specialist nursing needs. The factors related to this model are as follows:

Causal conditions. Nurses in the defence nursing services are registered adult nurses. It has been recognised that a cohort of nurses are required to care for patients in specialist areas on deployed operations. Nurses volunteer and are selected to undertake specialist training such as intensive care and emergency nursing.

The Phenomenon. The phenomenon was identified as issues were articulated during interviews that suggested that nurses encountered problems when caring for patients who required specialist intervention or specific groups of patients. The codes related to this phenomenon where lack of experience, specialist nurse training, peacetime preparation, patients and their injuries, caring for the local population, support in peacetime workplace, flexibility.

Context. A cohort of nurses receive training in areas of specialist practice that are deemed necessary by the DNS. Military nurses are deployed in these specialist roles as required. The codes that were related to this phenomenon were pre-deployment training, specialist training and nursing experience.

Intervening conditions. Nurses undertake their specialist nurse training in the NHS and as such their clinical exposure during training will be
dependent on the area in which they are employed. Following specialist
training, nurses will then be employed in the appropriate specialist area
within MDHUs. The clinical area in which they are employed will not
necessarily provide them with the expertise that they require for their
deployable role. For example, participants in the study referred to
working on general ITUs where they did not have the opportunity to care
for trauma patients that they would be expected to care for on deployed
operations. In addition, nurses were expected to care for paediatric
patients who were from the local population. As adult nurses, they had
not undertaken training to care for children. Therefore, the effectiveness
of the specialist nurse in their deployable role will be dependent on their
peacetime experience and consolidation following specialist training. The
nurses interviewed did acknowledge this as an issue. Of concern was the
support that they received by NHS colleagues in their area of practice.
Military nurses were not given the acknowledgement from NHS staff
regarding the role that they undertook on deployment; staffing of units
appeared to be the priority.

Actional/Interactional. Nurses used other colleagues in situations where
they felt that they did not have the competencies to look after a patient in
a specialist area or who had specialist needs. One participant talked
about using the experience of being a mother to look after paediatric
patients. However, nurses suggested that they just had to do the best
that they could in this situation.

Consequence. Whilst the military nurses did the best that they could do in
a particular situation, it was apparent that nurses often felt unprepared for
their role. This caused concern and worry which proved to be an added additional burden to them.

The defence nursing services have recognised that nurses are not always prepared adequately for their role on deployed operations. Therefore, the Defence Operational Nursing Competencies were launched in March 2009. The Defence Operational Nursing Competencies were referred to by some participants in this study, although not many.
Fig 6.4. - Paradigm Model – Supporting Patients with Specialist Nursing Needs

The paradigm model (Fig 6.4) describes the role of military nurses in supporting patients with specialist nursing needs, focusing on the transition from peacetime preparation to operational roles. The model highlights the importance of pre-deployment training, specialist nursing training, and existing nursing experience in preparing military nurses for operational roles.

### Codes relating to phenomenon

- Lack of experience
- Specialist nurse training
- Peacetime preparation
- Patients and their injuries
- Caring for the local population
- Support in peacetime workplace
- Flexibility

**Supporting Patients with Specialist Nursing Needs**

- Peacetime nursing role to operational nursing role
- Nursing in a new environment on deployment
- Pre-deployment training
- Specialist training
- Nursing experience

**Patient receives optimum care that the environment allows**

- Care for patient/accept role
- Delegate to other team member
6.12.3. Using the Defence Operational Nursing Competencies

The paradigm model (fig 6.5) illustrates the axial coding process for using the defence operational competencies:

Causal conditions. It has been recognised that military nurses need to have requisite competencies to be effective practitioners on deployment as described in the Defence Operational Nursing Competencies (2009).

The Phenomenon. The Defence Operational Nursing Competencies were development and introduced in 2009 to ensure that nurses had the requisite competencies for deployment. The codes that related to this phenomenon included competence, pre-operational training, nursing skills, operational nursing competencies, peacetime preparation, general pre-deployment preparation, business on operations, disease and injuries, good preparation and policy.

Context. It is proposed that military nurses should be able to achieve these competencies in their peacetime role and as such these competencies should provide a framework for practice and experience for military nurses working in MDHUs in order for them to be competent in their operational role. Both the competencies and the policy pertaining to implementation are not in the public domain. However, it is directed that military nurses should possess basic core competencies before they are deployed (DNS 2009 [not in the public domain]).

Intervening conditions. Military nurses may be aware of the Defence Operational Nursing Competencies, but may not be aware of their full detail and direction for implementation. Indeed, nurses interviewed were
not aware of the workings of the competencies and their application to practice. Achievement of these competencies will be dependent on the area of nursing practice that the nurse is employed in their peacetime role. Whilst it is accepted that the nurse may not be able achieve all the competencies that are required to deploy in their peacetime role, there is no mechanism in place to address the deficits at present. Also, the defence operational competencies focus on military nurses employed in field hospitals and do not address competencies for nursing patients on ships or in the air. These competencies are the responsibility of the relevant military services and despite the intention to introduce them (Defence Medical Education and Training Agency (DMETA) 2008), they do not exist as yet.

The Defence Operational Nursing Competencies, whilst very comprehensive, do not address many of the issues raised by this study so far; these will be discussed later. Also, the theory underpinning the development of these competencies is cited as nursing manuals and military publications. There is no evidence that the needs of military nurse on deployment have been taken into account.

**Actional/Interactional.** Nurses should have achieved the competencies that have been deemed essential prior to deployment. To date, no audit has been carried out to confirm this. Therefore, military nurses may still be deployed without the requisite skills. However, skills deficits may not be realised as the needs of the patient may change when mechanisms of injuries change.
Consequence. Nurses will still feel underprepared for their deployable role and will have to do what they can in the interest of the patient or will utilise other team members if this is possible. Given that the DMS promote governance, audit of the number of military nurses achieving the relevant competence has been directed, but has yet such audit has not taken place.
The DNS has recognised that military nurses need competencies prior to deployment. Nurses should be able to gain such competencies in their peacetime role. Peacetime role may not give the military nurse the exposure to gain these competencies.

- Nurse will achieve competence
- Nurse will not achieve competence

Nurse may be competent to deploy.

Codes relating to phenomenon:
- Competence
- Pre-operational training
- Nursing skills
- Operational nursing competencies
- Peacetime preparation
- General pre-deployment preparation
- Business on operations
- Disease and injuries
- Good preparation
- Policy
6.12.4. The Military Rank Dilemma

The paradigm model (Fig 6.6) illustrates the axial coding process for the military rank dilemma:

Causal conditions. As well as being a registered nurse, military nurses hold rank.

The Phenomenon. Military rank may cause a dilemma for military nurses on deployment. The codes related to this phenomenon included lack of experience, competence, pre-operational training, peacetime preparation, rank and hierarchy, advantage of previous experience, expectations from others, respect from others, general pre-deployment training, part of the job and military duties.

Context. Whilst all military nurses wear rank, this may not be a true reflection of their nursing or indeed their military experience.

Intervening conditions. The participants referred to dilemmas with regard to rank on deployment. Firstly, rank may not reflect the nursing experience of the individual concerned leading to adverse attitudes from other military nurses and other members of the military community as a whole. One respondent described being expected to carry out tasks due to the subordinate rank she held such as carrying the bags of a commissioned nurse. In contrast, another nurse described how she was promoted for deployment proposes. The rank indicated that she was a senior military individual, but she did not feel ready for this and felt under confident when she was asked to undertake roles that she was not prepared for. In another example, a participant described how a nurse was put in charge of a field hospital ward in recognition of her rank, not
her nursing experience. Another participant described how he was put in charge of a medical ward and feeling under confident in this role as he was a primary healthcare nurse.

Rank is also related to military duties. Military nurses will be expected to undertake military duties that are commensurate with their rank. Participants described how they were not always comfortable with this role. Whilst they had been taught these roles on military development courses, they did not always have the opportunity to practice these skills in their peacetime role. For example, military nurses who worked in an MDHU that was not close to a military establishment would not take on these roles in peacetime.

Actional/Interactional. Nurses either did not respect colleagues who held rank which did not reflect their nursing experience, or felt frustrated when rank was used to undermine them as professionals. Nurses often relied on colleagues in situations where they did not feel competent in their rank and used delegation and team resource management to address these issues.

Consequence. Nurses felt frustrated at times due to the rank issue as described. However, by being members of the military services, they had to accept this. The lack of ability to execute their nursing leadership roles on deployment may lead to a credibility issue, not only within the military nursing team but within the wider military community. Griffiths and Jasper (2007) describe the powerful effect that uniform (which includes rank) has and suggest that despite this that the military role is often subordinate to
that of caring. Indeed, it was evident that the caring of patients took primacy in this study.
Fig 6.6. - Paradigm Model – The Military Rank Dilemma

This chapter has how axial coding has been used to code codes together to identify phenomenon. The paradigm model is a tool that relate to the phenomenon as well as our finding relating to the phenomenon. These codes form the state category that will be discussed in the chapter. This chapter will explain the finding as between rank and rank experience.

Codes relating to phenomenon

- Lack of experience
- Competence
- Pre-operational training
- Peacetime preparation
- Rank and hierarchy
- Advantage of previous experience
- Expectations from others
- Respect from others
- General pre-deployment training
- Part of the job
- Military duties

Military nurses hold rank

Military Rank may cause a dilemma

- Rank will be recognised by other members of the military service
- Rank may not reflect nursing experience
- Rank may incorrectly represent military experience
- Rank will reflect military service experience rather than nursing experience

The military nurse may feel undermined or pressured because of the message rank gives to the other members of the team.
6.13. **Summary**

This chapter has shown how axial coding has been used to bring open codes together to identify phenomenon. The paradigm models identify the codes that relate to the phenomenon as well as the factors leading to the consequence. These codes will be used to form the core category that will be discussed in chapter eight.

The next chapter will explore the findings of both part one and part two data.
Chapter Seven

Review of Part One and Part Two Findings

7.1. Introduction

The aim of this chapter is to review part one and part two findings. As discussed in chapter four, this study used triangulation by adopting both quantitative and qualitative approaches in this study. Triangulation was intended to add completeness to the study (Foss & Ellefsen 2002, Jones & Bugge 2006) and also provide a means to give a deeper understanding of the phenomenon. As all data are relevant to this study, the researcher was careful to ensure that the data from part one was just as meaningful of that of part two (Foss & Ellefsen 2002).

As well as providing statistical data such as biographic details and exploring the nurses perceived preparedness to undertake roles such as caring for aviation related issues, road traffic accidents, training and sports injuries and patients who had sustained blast injuries. The breakdown of this data is shown in Table 7.1. The statistical data would suggest that preparedness to care for patients in the patient groups identified increases with the number of deployments undertaken. The reduction of those feeling fully prepared to care for patients who have sustained blast injuries in deployment Location Five (part one study) may be due to the move to operations in Afghanistan with the increased use of IEDs.

Participants in part one also had the opportunity to describe, in free text boxes, other roles that they had not received any training for. Indeed, a mean average of 53 percent of respondents indicated that they had undertaken roles for which they had not received any training.
<table>
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<th>Deployment Location 1</th>
<th>Deployment Location 2</th>
<th>Deployment Location 3</th>
<th>Deployment Location 4</th>
<th>Deployment Location 5</th>
<th>Deployment Location 6</th>
</tr>
</thead>
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<td>37%</td>
<td>48%</td>
<td>62%</td>
<td>60%</td>
<td>77%</td>
<td>70%</td>
</tr>
<tr>
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<td>35%</td>
<td>37%</td>
<td>43%</td>
<td>50%</td>
<td>33%</td>
</tr>
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<td>71%</td>
<td>67%</td>
</tr>
<tr>
<td>Blast Injury</td>
<td>28%</td>
<td>48%</td>
<td>50%</td>
<td>62%</td>
<td>58%</td>
<td>29%</td>
</tr>
</tbody>
</table>

**Table 7.1.- Summary of preparedness to care for specific groups of patients**

Data from the free text boxed were grouped and themed using a grounded theory approach.

The process adopted to compare the findings from part one and part two of the study was constant comparison which is congruent with grounded theory methodology. Whilst the process of comparing results from both quantitative and qualitative approach is not described in all descriptions of grounded theory methodology (Glaser & Strauss 1967, Glaser 1978, Charmaz 2008, Corbin & Strauss 2008), Corbin and Strauss highlight that grounded theory methodology is not prescriptive. Indeed Glaser (1992) suggest that a rigid process in grounded theory could be construed as forcing the data.

The axial coding process described in chapter six identified four categories which included:

- Competence to practice nursing on deployed operations.
- Supporting patients with specialist nursing needs.
- Using the Defence Operational Nursing Competencies.
- The military rank dilemma.
The questionnaires were filtered to fit with the criteria for choosing participants for part two of the study which was that the individual had been deployed and that they had been deployed to Iraq or Afghanistan or both. Then the questionnaires were grouped into those participants who indicated that they had undertaken a new task or role on deployment for which they had received no training. The filtering process of the questionnaire did not discriminate rank or which Service the participant belonged to.

The results of this filtering process are detailed in table 7.2:

| Number of participants deployed to Iraq/Afghanistan | 235 |
| Number of participants that indicated that they had undertaken practical nursing tasks for which they had received no training prior to deployment | 87 |
| Number of participants who indicated that they had received no training for tasks which were not practical nursing tasks but were competencies that they required for their role | 61 |
| Number of participants that indicated that they had no pre-deployment training issues | 87 |

Table 7.2. - Details of number of participants who indicated that they had not received pre-deployment training for a particular task/role

The practical nursing role/tasks for which no prior training had being undertaken included responsibilities such as venepuncture, cannulation, burns dressings and psychological support of host nation patients. The care of paediatric patient, burns and patients that had severe trauma was included in this group. The non-practical nursing task/roles included acting as a vehicle troop commander, undertaking the role of ward manager and running a pharmacy section. Roles such as undertaking aeromedical evacuation were included in this group as such
tasks were deemed as process rather than a specific nursing task. However, whether or not nursing tasks within this role were an essential training need could not be deciphered from the details that were included in the free text box.

7.2. **Competence to practice nursing on deployed operations**

The codes in this category included competence, pre-operational training, nursing skills, peacetime preparation, the team, advantage of previous experience, building on deployment experience, post-registration consolidation, flexibility, sharing experiences, continuity and good preparation.

The axial coding process highlighted that the military nurse may be employed in a field hospital or in a specialist nursing role such as aeromedical evacuation. Analysis of the data identified that military nurses lacked some skills and experience to undertake their operational nursing role. Such tasks included venepuncture and cannulation.

The following text raised this as an issue in part one of the study:

> 'IVs [intravenous medications], cannulation, venepuncture'

Vignettes from the interviews in part two also highlighted this skill issue:

> ...I mean I was on a paediatric ward before I went there and I did not have cannulation skills...

*Participant three*

Where the nurse had received training for a particular skill, the training did not always take into account the environmental factors that the nurse had to work in and therefore how such tasks would need to be adapted. A nurse employed on aeromedical evacuation alluded to this when she described that the skill of chest
ausculation with a stethoscope that she had been taught on one of her pre-deployment courses was not useable on the back of a helicopter.

Therefore, nurses did feel that they were lacking some skills to enable them to undertake their role on deployment. As discussed in the introduction, MDHUs were established to provide training and experience for DMS staff to undertake their role. However, military nurses may not be working in the appropriate place to learn skills such as venepuncture or cannulation. For example participant three was employed in a rehabilitation centre alluded to this issue:

...the rehab unit isn't or wasn't a clinical environment to work in...so a lot of my job was based around admin and paperwork and things like that.....

[Participant nine]

Proficiency in nursing practice is not just about learning a new task or role, it is also having confidence and experience to undertake the role and associated tasks (Benner 1982a). Therefore, even if nurses posses the skills to undertake their role, they need to have experience in practice. This issue also related to nurses who were employed in specialist roles such as intensive care.

Practice and experience acquired during the military nurse’s peacetime role needs to be relevant to their operational role. Relevancy of peacetime nursing to deployment nursing was highlighted in both studies. A respondent in part one described a scenario where her peacetime role was not conducive with her role on deployment:

We saw approximately 50 patients injured to either blast or gunshot. As a practice nurse I have not had to be part of a trauma team before this deployment

[Part one respondent]
This issue was supported by another nurse:

[we/I] treated injuries that I had not come across before.

[Part one respondent]

Part two of the study allowed military nurses to expand and discuss their thoughts. The following vignettes from part two data support gives supporting evidence for this issue:

...but in terms of the role I was going into which was actually to work on a medical ward...again didn’t feel particularly prepared...I had never worked on a medical ward post registration....

[Participant three]

Some military nurses did feel that their peacetime role did give them a good grounding for their operational role. Experience did have its advantages:

...being an experienced primary healthcare nurse prepared me for deploying into this role on ops. I felt much more competent in my role...

[Part one respondent]

It is not clear from this participant’s questionnaire, what role the practitioner undertook on deployment. A participant in part two of the study did endorse this and despite being registered for a relatively short period of time, he felt his peacetime role had given him the experience for his role on ops:

...obviously my background in orthopaedics was a great help there...spinal fractures I deal a lot with spinal injuries cos although I work in elective we take a lot of patients from the trauma ward...so I had a lot...you know..the spinal injuries that was a big help....

[Participant five]

Another respondent in part one of the study endorsed the comments and added that preparation for deployment had been helped by effective pre-deployment training and learning whilst on deployment:
...my pre-tour [deployment] training was extremely beneficial as was my in tour learning...

[Respondent from part one]

Learning on deployment was seen as an advantage, but appears that is could have been used better. For example, a participant in part two of the study described how she felt supported by a colleague:

.....she did a really good job of teaching me and everything so I got to grips with it and she was still there whilst I was getting to grips with it.....

[Participant nine]

The advantage of an effective handover was seen as another means of support by another participant:

...I was lucky, I had a very comprehensive handover...but that was personality driven; somebody else might not have been quite so proactive...It was...I probably would have struggled in that initial phase without that level of handover...

[Participant seven]

There is no formal means by which training is undertaken on operations. It is assumed that the individual is fit for deployment. The introduction of the Defence Operational Nursing Competencies (2009) aimed at ensuring that military nurses have the requisite competencies for deployment. However, whilst there is direction and guidance given with regards to the assessment of achievement of these competencies, there is no such direction on if and how frequently these competencies need re-assessment.

Newly registered nurses are required to undertake a rotational programme within the MDHU which go towards achieving the core competencies that are included in the Defence Operational Nursing Competencies. Some participants suggested
that some of the more senior military nurses may need refreshment of skills and knowledge in some areas. A participant in part two of the study alluded to this:

...but if you are going to an aeromed role you need a little bit of knowledge about everything and it needs to be up to date knowledge and I definitely think, even some senior nurses, would benefit from a phase before a second, third, fourth aeromed deployment...

[Participant seven]

Care of refugees and prisoners was highlighted as an aspect of military nursing on deployment that nurses had received no training. It is a requirement of the Geneva convention that patients from the host nation, including prisoners of war are given appropriate medical care (ICRC 1997). Despite the underlying principles of the Geneva Convention being taught during basic military training and also in introductory military medical and nursing training, there was an apparent issue with caring for such patients in Iraq and Afghanistan. An example was given in part one by a respondent:

...care of refugees including children and pregnant women...

...caring for detainees...

...psychiatric support to Iraq civilians...

[Comments from part one]

These issues were expanded by participants in part two of the study and included some cultural challenges faced by female military nurses caring for male patients from the host nation:

...a lot of the aeromed team were women of course and some of them [local Afghans] were quite disrespectful towards women....I think...on one occasion one spat at one of the girls which obviously you couldn't do anything about...

[Participant five]
...I couple of them weren't happy to be treated by us [host nation patients]...  

[Participant seven]  

..I found them quite intimidating at times...I suppose I wasn't prepared for it, but they would, it is funny...but they would sort of whisper to themselves as if they were plotting something, plotting their escape and obviously they did not like women so being female...my team were all female, they didn't like that...I think we had like the odd thing like water jugs chucked at us and things like that....they didn't like us nursing them put it that way.  

[Participant four]  

But cultural issues not only had an effect on the practitioner; they had an effect on the patient. Practices and procedures that the military nurse as part of their duties were seen to expose the local population to stress. For example in the case of aeromedical evacuation, some of the host nation patients had not flown in an aircraft before. Participant five in part two of the study described how a policy had been introduced to ensure that host nation patients wore protective body armour when they were being transferred by helicopter:  

...there were certainly a lot of Afghans that were scared of flying probably because they had never been in planes before...which is more likely...we had rules about safety on the flights...helmets, body armour and none of the Afghans ever had helmets or body armour...about half way through my tour we had a visit...from then on we had to carry helmets and body armour for all our patients....  

....[did they wear it?] Most of the time...some of them refused to, some of them you couldn’t if they had chest drains or other injuries that wouldn’t allow it so...we still had to carry it, drape it over them sometimes...  

[Participant five]  

It was apparent from this participant’s response that body armour was not always appropriate for the patient and also some patients refused to wear it. It is not clear why this was, but it may have been due to fear or cultural beliefs of the patient.
Duke et al. (2009) describe the need for cultural awareness in practice and suggest that such awareness is a two way process of the practitioner being aware of cultural issues and the patient being made aware of the lack of knowledge that the practitioner may have regarding their culture or religious practices. However, implementation of such practice is described in a peacetime setting and therefore may not be as straightforward to introduce in a hostile arena. Nevertheless, more awareness on the behalf of the practitioner regarding cultural issues and steps to take to avoid conflict could be part of the deployment training. Participant one described how her understanding of local language helped when she was caring for patients from the local population:

...because the Iraqi detainees they are not middle class or upper class they are really quite rough guys and their culture they relate better to a bloke anyway...part from me and I speak fairly fluent Arabic so again that was very useful....

[Participant one]

The use of language enabled this respondent to gain respect from patients of from the host nation. This participant went on to explain how she was able to use this skill to negotiate with and reassure patients. She gave the example of how she used language to effectively intervene when a patient went on hunger strike. She was able to explain the consequence on his health if he persisted from abstaining from food.

Military nurses going on deployment may not be aware of the cultural needs of their patients. Web based courses on subjects such as culture and religion are available to all military personnel, but there is no recommendation that these courses should be undertaken as part of pre-deployment preparation.

Therefore, there are many contributing factors that can affect the military nurses competence to practice on deployed operations. Whilst military nurses are deemed competent as Registered Nurses, there are additional skills that they will
need to enable them to function confidently in their role on military operations. This has been recognised by the DNS and has resulted in the introduction of the Defence Operational Nursing Competencies in 2009. These will be discussed later in this chapter.

As discussed in the previous chapter, the DNS has identified the requirement for nurses to have additional skills in specialised areas of nursing practice such as emergency nursing, intensive care and theatres. Again, by just completing a course in these specific areas of nursing practice does not guarantee that the military nurse will have the skills to care for the patients that will require care on deployed operations.

7.2. Supporting patients with specialist nursing needs

The issues of skills deficits in areas such of intensive care nurse were highlighted in the previous chapter. The comments concluded that military nurses were not afforded the appropriate experiences in peacetime to prepare them for their peacetime role. For example working in an intensive care unit in a district general hospital did not expose the intensive care nurse to the challenges of caring for patients with polytrauma or burns. These findings were conducive with the comments made by respondents in part one of the study.

Comments included in the free text boxes in part one of this study described deficits in practice knowledge and experience in such roles as intensive care:

...Looking after ventilated paediatrics...

[Part one data]

The issue of caring for paediatrics in the intensive care environment was also highlighted by participants in part two of the study. An example of this is the comments made by participant four:
...I hadn’t hardly looked after any ventilated and sick adults let alone looking after paediatrics...

[Participant four]

Specialist nursing does not just involve working in areas such as intensive care, emergency departments or theatres. It encompasses skills and knowledge that were not taught during basic nurse training (International Council of Nurses 1987). Nurses in both parts of the study referred to issues for caring with patients with specific injuries. For example:

...Transfer or a 1yr old burns patient...

[Part one data]

...Taking care of paediatric patients...

[Part one data]

...Burns patients...

[Part one data]

...I was working on an elective orthopaedic ward at the time so the injuries I saw I had not any experience looking after these injuries (e.g. amputations, gunshot wounds etc)...

[Part one data]

Participant four in the second part of the study also raised concerns about looking after paediatric patients:

...you are taught in the civilian world that you should never do anything that you are not competent to do or you don’t feel competent to do...but we were made to do things that we weren’t competent to do like look after paediatrics...

[Participant four]

The DNS have recognised that the care of paediatrics is an issue and have introduced a three-day course which will equip the nurse with some knowledge
and theory to look after paediatric patients. Given that the course has not been introduced to date, the relevancy and benefits of the course to the military nurse’s deployable role cannot be assessed in this study.

As described, the care requirement of specific groups of patients, such as paediatric, burns and trauma have been identified in both parts of the study. In addition participants in both studies did highlight issues when caring for other groups such as general medical and general surgical patients. Whilst nurses may have had the opportunity to care for these groups of patients in their pre-registration training, they may not have had any subsequent experiences. Comments from respondents in part-one of the study alluded to this:

...surgical dressings – not worked on a general surgical ward...

[Respondent part-one]

Another responded identified that their new role was:

...worked on a medical/infectious diseases ward...

[Respondent part one]

This participant indicated that they worked in a general area of nursing in their peacetime role, so it is presumed that this is not in a medical environment. These issues where discussed during interviews that were described in the last chapter. For example, one participant referred to the fact that despite being a senior nurse she had to ‘read up’ on the care of medical patients as she was expected to look after them:

...my only thing is that I am a specialist surgical practitioner and when the flights came up that I had to cover, a couple of them ended up being severe medical patients....and I was again luckily I
had the sense this time to take a couple of text books with me and
I had my head in the books...

[Participant seven]

This nurse was a senior military nurse and had the foresight to refresh her
knowledge of the patient group that she would be expected to be caring for.
However, she did not discuss whether this enhanced her confidence in looking
after this group of patients.

The patient data from Iraq in 2006 (the year with the highest number of field
hospital admissions) show that 93 of patients were admitted as a consequence of
injuries inflicted in action as opposed to 1209 who were admitted with non battle
injuries. In 2009 in Afghanistan those admitted following military action was 508
and those admitted with non-battle injuries number 721 (Defence Analytical
Services and Advice 2010). Whilst the data available does not indicate the
specific causes of non battle injuries, such injuries can range from admission due
to diarrhoea and vomiting, occupational injuries and those causes such as road
traffic collisions. The MOD define non- battle injury as 'any injury that is not
caused by a hostile act' (Ministry of Defence 2010b).

Whilst the care of non-battle injuries will not be discussed at length, Becker and
Laundy (2003) in their study of 1511 hospital records of patients admitted to
hospital in operations in Oman concluded that 74 percent of patients required
care from a physician as opposed to patients who required a surgeon which was
two per cent. Whilst these figures may give an indication of the types of patients
seen, the number and types of patients admitted will be dependent on the military
operation and the type of warfare that is employed as discussed. Indeed, this
study suggests that only two percent of patients required surgical intervention. It
could be assumed, given the number of patients that are sustaining amputations
and other trauma in the current conflict in Afghanistan, that the number of
patients that are requiring surgical intervention will be somewhat higher. Unfortunately, these figures are not in the public domain at present.

Therefore, data from both parts of the study would suggest that military nurses need additional nursing skills to care for patients on deployment. Nurses working in specialist areas such as intensive care may also need to further their knowledge and skills to enable them to care for the patients that they will be required to care for in their deployable role. General nurses may also need some additional skills or a revision of a particular aspect of nursing prior to deployment. Such a requirement will be dependent on the place in which they are employed in a peacetime setting. Data regarding field hospital admissions would suggest that military nurses will have to care for patients with a multitude of needs. In addition, the requirement to care for patients from the host nation will need additional skills such as the recognition of culture and the use of language.

The DNS have introduced the Defence Operational Nursing Competencies (2009) as a way to ensure that nurses have met various skills objectives before they are deployed.

7.4. Using the defence operational nursing competencies

The Defence Operational Nursing Competencies were elucidated in the previous chapter with supporting vignettes by participants. These competencies where not referred to by the participants in part one of the study and the assumed reason for this was that no specific question was asked about them. More importantly, part one of the study was completed before the Defence Operational Nursing Competencies where released. Therefore, the data from part two did provide missing data which was relevant to the study and therefore highlights the use of triangulation in this study.
7.5. The military rank dilemma

The data analysis following part two of the study highlighted the military rank dilemma. Griffiths and Jasper (2007) describe how military nurses have to juggle with the roles and responsibilities of being a nurse with those of being a Serviceman. Analysis of data in this study implies that there are various issues with rank. As seniority in rank denotes the length of service that the individual has completed, it may give a false indication regarding the clinical experience of the individual. For example a military nurse holding a subordinate rank may not receive appropriate recognition that a registered nurse should receive. For example, a participant in part two of the study explained how she felt undermined by nurses that held higher rank than she did:

"...being a junior rank you are at the bottom and it doesn't matter if you've got more nursing experience than say some of the officers that have only got a couple of years experience and go straight in as an officer...because you, they treat you like without any respect...because you could have had a lot lot more experience being a junior or senior rank and people don't take that...they just don't realise it and...and just sort of take advantage and things like that really..."

[Participant four]

This participant explained how she was expected to carry bags of others as it was felt an appropriate role for her in view of her subordinate rank.

Data from part two also portrayed the issues that nurses may have when they feel that they are awarded rank that is above that of what they feel they are prepared for. The comments made were not only restricted to the military nurse's clinical role but could be related to their military role. Free text data from part one of the study highlighted these issues. For example one responded in part one described that she was acted as the team leader in a treatment room whilst on deployment in Afghanistan; a role for which she was not trained. Her biographical data also highlighted that she was junior in rank. Whilst it is difficult
to unpick all the issues, it could be implied that a military nurse was expected to undertake a role with an element of management and leadership for which she did not have either the military or nursing experience. As discussed in the previous chapter this can not only pose issues for the practitioner but can also cause conflict within the team. Participant nine explained the personal experiences when she was awarded a higher rank:

...It was just everything was so new...I had that support but all of a sudden on some of your [duties] you are going out on your own or you might be going with people that are junior to you that are looking to you and especially getting the acting sergeant, people do look to you for support, guidance, information, advice and everything...

...there was another girl who came at the same time as me who was I think was qualified a little bit, I think, qualified about 6 months longer than I had been and she had been in a clinical environment since qualifying ...and got the acting sergeant above her so...[the participant explained how the individual was not happy with this situation]

[Participant nine]

Time served in the DNS does not always give a true reflection of the deployment experience an individual may have. A respondent indicated on their questionnaire that they felt that their deployment experience was a new task and role as a whole as they had never deployed before. The biographical data highlighted that this individual had served over 20 years in the DNS and had also being a registered nurse for this period of time. The individual also held a senior rank within the Service. Such lack of deployment experience was described by participants in part two of the study. Participant four appeared frustrated when she described how her senior colleagues had never deployed before:

...They [nursing officers] might of been in the Service a lot longer than I had, but still have never deployed so we were all really in
Therefore, rank may not give a true representation of either nursing or deployment experience and as such may cause some conflict within the team.

As servicemen, military nurses are also expected to carry out military duties. Such duties will reflect the rank they hold. The analysis in the previous chapter highlighted that nurses often felt unprepared to take on these roles as they were not able to practice such roles in their peacetime employment especially if the nurse is employed within a MDHU that is not attached to a nearby military unit. Such duties may include guard commander were the military nurses will be expected to lead and supervise other military personnel in the guarding of a medical facility. This may also include the supervision of weapons. Guarding of medical facility and medical convoys are accepted as part of the Geneva Convention (ICRC 1997).

As part of their initial military training and ongoing military development, military nurses will have been taught the theory and practised military duties that they would be expected to undertake at a particular role. As some respondents deemed such duties as new tasks and roles, one could assume that they had not undertaken these military duties for some time, although this could not be guaranteed as a reason given the brevity of the information in the free text boxes. The following comments from part one of the study highlight these duties as a new role or task:

...armoured ambulance including top cover...

...OC [officer in charge] CG [Guard Commander] on ops...

...guard duties/commander...
The issue of undertaking military duties that were commensurate with rank were also identified as an issue by participants in part two of the study. The following vignette gives an example:

...the most military thing we did which was a big learning curve actually, was guard protection and being a corporal we were expected to be...2 IC guard commander and that was something that being in the NHS here..you’d had no experience of whatsoever..

[Participant eight]

This participant worked in an MDHU and highlighted the issue of not having the experience to undertake the role:

...it was a big learning curve because we just don’t get exposure to that kind of military experience here...

[Participant eight]

Respondents in part one of the study also highlighted other more diverse duties that they were expected to undertake as military personnel. Examples including providing top cover for vehicle convoys:

...also took part in vehicle top cover...

...top cover for vehicle convoys...

...armoured ambulance...including top cover...

...helicopter embedded foot patrols...

The description of ‘top cover’ for vehicle convoys involves armed escort of vehicles. One would assume that such convoys were medical convoys which would be appropriate given the wording of the Geneva Convention (ICRC 1997).
However, the researcher has been informed verbally that such convoys included non medical vehicle movements. As this is not conducive to the ethos of the Geneva Convention, the researcher questioned this comment to be told that Commanders deem that military medical personnel act as regular military personnel when not carrying out medical duties. This fact could not be verified and is outside of the remit of the study, but the researcher believes that it is worthy of note.

Therefore, as nurses hold military rank there will be certain expectations from others. From the nursing perspective, seniority in rank does not always give an accurate reflection on nursing practice knowledge and experience. This can cause issues as the nurse may hold a senior rank and not have the nursing experience to give them authority for decision making. Likewise, subordinate nurses may have the experience yet they are not given the recognition from others which can lead to frustration. With military rank comes the expectation to carry out military duties that are commensurate with that rank. Nurses working within MDHUs are not always afforded the opportunity to practice these duties which adds to the frustrations that military nurses may face on deployment.

This chapter has highlighted how the findings from part one have been supported and expanded by data from part two of the study. Whilst the findings from part two have complemented the data from part one, vignettes from part two have added depth and meaning to the brevity of the comments that were included in the free text boxes in part one of the study. Nurses articulated their issues concerning the contributing factors in being able to practice nursing on deployed operations. Whilst military nurses are deemed fit to practice as registered nurses the NMC Code directs that ‘you [registered nurse] must have the knowledge and skills for safe and effective practice when working without direct supervision’ and that ‘you must recognise and work within the limits of competence’ (Nursing and
The NMC defines lack of competence as 'lack of knowledge skill or judgement...' (Nursing and Midwifery Council 2010a). However, in defining lack of competence the NMC suggest that an important factor is the nurse's insight into their lack of competence. Nurses in both parts of the study did highlight the areas where they lacked some skills which were necessary for them to undertake their operational role. They also articulated the reasons for this which included lack of opportunity due to their peacetime role and also some issue with the application of theory on knowledge that was gained in the peacetime setting to that of the operational role.

This issue was also described by military nurses who had received additional training to work in areas such as intensive care. Despite the additional training, experience did not always meet the requirement to practice in these areas on deployment. The military nurses posited their lack of experience in caring for specific groups of patients such as burns and paediatrics. The issues of caring for patients from the host nation with the associated language and cultural issue did impact on nursing practice on deployment.

As discussed, the introduction of the Defence Operational Nursing Competencies in 2009 is seen as a way of ensuring that military nurses have the additional competencies before they are deployed and newly registered nurse undertake a clinical rotation programme for 18 months when they are employed in MDHUs. As these competencies are still in their infancy, it is too early to predict if they will address competency issues.

The issue of rank and associated duties were alluded to in both part of the study. With regards to military nursing practice, the nurse’s military rank does not always reflect the nurse’s clinical knowledge and experience. With military rank come additional military duties that are not nursing. Respondents and
participants expressed their inexperience in undertaking these roles due to lack of experience.

The use of triangulation has enabled the researcher to build on the findings from part one of the study. The review of both sets of findings in this chapter has contributed to the development of a core category.
Chapter Eight

The Emergence of a Core Category

8.1 Introduction

The study has highlighted the competence issues that military nurses have on deployment. The axial coding process enabled the fusion of categories identified in the open coding process into the following broader categories:

- Competence to practice nursing on deployed operations.
- Supporting patients with specialist nursing needs.
- Using the Defence Nursing Operational Competencies.
- The military rank dilemma.

The review of part one and part two findings confirmed the competence issues that nurses face when they are undertaking their deployable role and enabled the researcher to focus on the identification of a core category.

8.2 The core category

Selective coding of the codes identified in the axial coding process were used as the platform to identify the core category (Strauss & Corbin 1990). Strauss and Corbin (1990) recommend that the paradigm model used in the axial coding process is also used to aid description on how the core category was identified. Thus, the conditions that led the phenomenon, which in turn led to the context, which subsequently led to the action/interaction (including strategies) which finally leads to the consequences (Strauss & Corbin 1990: 124-125). Again, the researcher found this a useful tool. The paradigm model used for the identification of the core category is shown at fig 8.1.
Figure 8.1. - Development of the Core Category: Competence to Practice on Deployed Operations
8.2.1. **Conditions.** Military nurses are employed by the military services to provide nursing support as part of the medical effort to provide medical care in both peacetime and during hostilities. When not on deployment, the majority of military nurses are employed in primary health care facilities on military bases or in MDHUs. A small number of these will serve in overseas locations.

8.2.2. **Phenomenon/Core Category.** The phenomenon identified for the core category was 'Competence to Practice on deployed operations.' This phenomenon provided the foundation for the acknowledgement of the issues raised during the study. Strauss and Corbin (1990) define the phenomenon in grounded theory as 'The central idea, event, happening, incident about which a set of actions or interactions are directed at managing, handling, or to which the set of actions are related' (Strauss & Corbin 1990: 96). The phenomenon identified for the core category in this study fits well with this definition. It should be noted that the author has no evidence to suggest that military nurses are not fit to practice as registered nurses. The intention is to identify the knowledge, skills and experience that nurses felt that they were lacking in their practice on operational deployments. The deficits in these factors are out of the control of the practitioner. The nurses were well aware of the deficits and were mindful of the requirements of the NMC which states that nurses should only practice without supervision when they are competent. The nurses on deployed operations did not always have the opportunity to avail themselves of supervision as specialist support was not available on deployment.

8.2.3. **Context.** Military nurses are all registered nurses. They may hold an additional qualification such as intensive care, theatres or accident and emergency. Military nurses also hold military rank. Nursing experience is taken in account when awarding rank when the nurse enters the Services but may not reflect clinical expertise. Experience, skills and knowledge will have developed...
with time in the Services. This research has shown that military nurses feel better prepared when they have been deployed more than once. This of course pertains to the type and location of deployment. For example, previous deployments to a different location may have exposed the nurse to a different cohort of patients and environmental demands. Nurses will have to care for patients of the host nation and this will need the nurse to acknowledge culture and language issues.

As discussed, rank may not reflect the clinical or the deployment experience the military nurse may have. Senior nurses may not have been deployed before and may not be current with the demands of the clinical area in which they are placed during deployment. A more subordinate nurse may have more deployment experience and appropriate skills for the deployment environment. However, rank may not reflect this. Military nurses may also be awarded senior rank for which they do not feel prepared for.

Military nurses will be required to undertake military duties that are commensurate with their rank. Again, the nurse may not have the previous experience to execute this role effectively.

In essence experience will be moulded by the peacetime role of the nurse. Such roles may not afford the military nurse to undertake clinical roles such as venepuncture and cannulation which may be an essential competent of their deployable role. Even if they are employed in the area that is deemed appropriate for their deployable role, such as intensive care, the cohort of patients that they care for in peacetime may not reflect those that they are required to care for on operations. Military nurses may be expected to care for specialised groups of patients such as paediatric and burns.
The DNS have recognised that military nurses do need specific competencies to practice on deployed operations and have implemented the Defence Operational Nursing Competencies. It is intended that no military nurse is deployed unless they have completed set core competencies. As these competencies were released in 2009, it is too early to assess their benefit. It is worthy of note that competencies have only being written for caring for patients in the land environment. The Defence Operational Nursing Competencies for caring for patients in the air or at sea have yet to be implemented.

Military nurses are subject to postings every two to three years, often to a new location. It could be argued that such turbulence will have an effect on the development on a practitioner's proficiency. Benner (1982a) posits that practitioners need to consolidate and build on experience in a particular clinical area to move from novice to expert practitioner. Conversely it could be argued that the practitioner will have a wider experience and knowledge base if they are exposed to different clinical situations, but there is no evidence from this study to support this.

The acknowledgement of a military nurse's role was found to be lacking amongst some civilian colleagues in the NHS. This conflict often caused a barrier and military nurses had to fight for leave and training time.

8.2.4. Action/Interaction. As discussed, military nurses did have an insight into the additional skills and knowledge that they required for their operational role. The military nurses who participated in this study described how they managed this deficit. Where possible, military nurses looked to others in the team who had the requisite skills and knowledge to look after a patient with specific needs. Another nurse described how she used literature to update her knowledge about a particular patient group. Other nurses cared for patients as best they could
given the constraints of their knowledge, skills and experience. Whilst they were acting in the best interest of the patient, they were aware of the NMC's requirement for registered nurses to practice within the boundaries of their competence and this was a concern to some.

8.2.5. Consequences. There is no evidence that patients did not receive the care that they needed (Although, this is beyond the scope of this study). More than 90 percent of casualties have survived. This figures compares with a survival rate of 70 percent in World War II and 76 percent in the conflict in Vietnam (Hyer 2006). This improvement is due to advances in battlefield trauma management and also related to speed at which casualties receive care (Hyer 2006). However, there is no evidence from this study to indicate how and if military nursing practice has influenced these figures.

Therefore, various elements are required to ensure that the military nurses have the competence to practice in their deployable role. These elements not only involve successfully completing training tasks but experience plays a pivotal role to practice on deployed operations. Other important contributing factor includes rank and the peacetime role of the military nurse. These factors are out of the control of the military nurse. The next chapter will describe the development of a core category.
Chapter Nine
Discussion and Findings

9.1. Introduction

This chapter will explore the development of the core category, Competence to Practice on Deployed Operations. As discussed earlier, a literature review is not normally carried out at the start of a grounded theory study as it is felt that the a review of the literature before the data are collected and analysed may influence the researcher's opinion and lead to bias which may subsequently have an effect on the study (Glaser & Strauss 1967, Corbin & Strauss 2008). Corbin and Strauss (2008) describe the need to link concepts with the data and suggest that this should be carried out at the appropriate time and with caution as the researcher will possibly find similar concepts when exploring the literature. They explain that whilst they may be similar concepts, they may have different underpinning contexts to that the researcher will find in the analysis of their data.

The literature search was carried out before the data analysis in this study as it was a requirement to gain funding from the DMS Deanery and also to acquire ethical approval from the Ministry of Defence Research Ethics Committee. A review of the literature did not identify any studies that related directly to the research question for this study, but a synopsis of the DNS and literature related to competence was discussed. The themes for the literature review included:

- Nurse competence.
- Learning as adults.
- The motivation to learn.
- The nurse's requirement to learn.
- The developing professional.
- Military nursing.
• The registered nurse in the Defence Nursing Services.

• Going on deployment.

The themes will not be discussed in any particular order in this chapter, but will be woven a discussion of the core category. Additional literature that has been read during the course of this research study will be included. A theoretical framework will be developed from the core category and will provide a backdrop for the conclusions and recommendations in the final chapter.

9.2. Competence to practice on deployed operations

The review of the literature highlighted some ambiguity regarding the definition of competence. The Oxford Dictionary definition of competence is 'having the ability or authority to do what is required' (Pollard & Liebeck 1994). But the factors that a nurse requires to be deemed to be competent to practice is not always clear (Watson et al. 2002, Khomeiran et al. 2006, Lofmark et al. 2006). Indeed, a systematic review carried out by Watson et al. (2002) argues that the lack of agreement on what constitutes competence has an impact on the assessment of the nurse's performance. Illeris (2008) suggests that employers often relate the achievement of competence to the completion of competencies and as such does not take into account other factors such as personal perceptions and values.

Nurses in part two of this study described what they felt what competence meant. The comments included:

...it means...well..she was a sergeant so she did have experience, she had worked on, within secondary healthcare since qualifying and she had been qualified a number of years...

[Participant nine]
...I think having confidence in what you are doing and have done it enough times to feel confident in what you are doing and know, know values and parameters, things like that...

[Participant eight]

...Well I would be happy that I have got the knowledge base and the practical skills to effect patient care positively...

[Participant seven]

The participants descriptions of competence included some interesting factors which are congruent with the descriptions of competence described in the literature review (see chapter three). Experience, confidence, knowledge and skills are considered essential elements of competence according to these respondents. Such factors are congruent with the factors that are highlighted in the research. Benner (1982a) talks about proficiency in nursing and how experience is related to the levels of proficiency of the nurse; the expert nurse having spent a considerable amount of time in a specific area of nursing practice. Illeris (2008) describes additional elements that are required for an individual to be competent which relates to learning. Such factors include knowledge and understanding, emotion, motivation, action, communication and cooperation.

The NMC direct that nurses should not undertake duties without supervision unless they are competent (Nursing and Midwifery Council 2002). Whilst the NMC does not define what competence is, they define what lack of competence is and suggest that it includes 'lack of knowledge skill or judgement...' (Nursing and Midwifery Council 2004a [online]). These factors play a part in other factors that were related to competence to practise on deployed operations that will be discussed later. Achieving competence is a developing and continuing process and will reflect the nurses continued exposure to clinical situation. For military nurses, staying in one clinical area for a prolonged period of time is not an option due to turbulence caused by postings and deployment. Nurses in the study did not articulate that they were not competent, but suggested that they did lack
some skills to enable them to function in a particular deployable role. Whilst postings and deployments may be not conducive with Benner's suggestion that experience is a requirement for enhancing proficiency and is pivotal to reaching the realms of expert practice, it may give the practitioner a wider breadth of nursing knowledge. Billet (2002) in his study on how specialist and generic skills in professions such as hairdressing, car mechanics and tailors is dependent on how they are employed found that those who had generic skills rather than specialist were more flexible and could deal with a plethora of issues. Whilst this study was not related to nursing, it could be argued that as military nurses are employed in a variety of settings they will be better prepared from a generalist nursing perspective. However, experience will still be dependent on the practice area in which they are employed in the peacetime setting. These clinical environments require some degree of relevance to the operational role of the nurse. Indeed, one of the intentions of the closure of military hospitals was to enable DMS personnel to gain clinical experience that was relevant to their operational role (Ministry of Defence 1995).

9.3. Peacetime role and experience

Military nurses are registered nurses who may have an additional nursing qualification such as intensive care, theatres or emergency nursing. As they are part of the military services, they also hold military rank. In peacetime, the majority of military nurses are employed either in medical centres on military units or within MDHUs. The experience and skills they have for deployment will be dependent on the areas they are employed in peacetime. Nurses in this study articulated some of the skills deficits that they had. These included venepuncture and cannulation. In addition, nurses described their lack of knowledge and experience when caring for specific groups of patients such as those who had sustained burns, polytrauma, paediatrics and injuries caused by ballistics. The
care of patients who were severely injured was described in other studies (Stanton et al. 1996, Biederman et al. 2001, Wallis 2001). Participants also elucidated that whilst the DNS had provided specialist training for their role, this experience may not be relevant. For example, following intensive care training, some nurses worked on a general intensive care unit where they would not see the types of patients that they would be expected to care for in the operational setting.

From a historical perspective the lack of previous and relevant experience featured in military nurse’s accounts of their deployment experiences. For example Biederman et al. (2001) described how Australian nurses who cared for patients in the Vietnam war highlighted the issue of lack of training prior to their deployment. A history of British Army nurses also highlighted the lack of training for their role (Tyrer 2009). Accounts from nurses described how they undertook roles normally undertaken by doctors such as lumbar punctures. Whilst this study did not highlight issues caused by the lack of medical officers, a lack of experience in specialist areas in addition to the lack of nurses with such experience was seen as an issue. For example, the DMS on deployment are expected to care for patients of the host nation. These patients include children and the nurses in this study highlighted their lack of knowledge in this area. For example a nurse in intensive care articulated her dilemmas when caring for paediatric patients:

...looking after ventilated paediatrics...and I hadn't hardly looked after any ventilated and very sick adults let alone looking after paediatrics and I know that who I was working with had no paediatric experience at all or very limited...so I think again you are all in the same boat and being asked to look after paediatrics
when we haven't had any experience or I hadn't got any
knowledge on paediatrics at all...

[Participant four]

The RCN's publication on defining staffing levels for children's and young people's services suggest that 70% of nursing establishment [in paediatric intensive care] should demonstrate knowledge, skills and competency attained via specialist post-registration education in paediatric intensive care' (RCN 2003).

The Department of Health recommend that all staff providing care for children should possess the appropriate knowledge base and skills and that care should be evidence based (Department of Health 2003). The DNS do not recruit paediatric nurses but have recognised that military nurses do lack skills in caring for this group of patients. Therefore, a three day course on paediatrics has been developed. It is believed that the course will not involve any practise placements, which will mean that the military nurse will not have an opportunity to consolidate the course or practise their new skills prior to deployment. Given the infancy of the course, it is too early to say whether this course meets the needs of the military nurse.

It is accepted that military nurses and other military medical staff will be required to care for patients from the host nation, including children (ICRC 1997), so it is likely that most deployments will include the necessity to care for children.

Therefore, whilst it is accepted that military nurses should be proficient to care for a group of patients that is related to their mode of training, that is adult, mental health or children at the point of registration. The NMC posits that the registered nurse is to be able to ‘Demonstrate overall competence in care and case management’ (Nursing and Midwifery Council 2004b:14). Moreover, following a NMC Consultation relating to fitness for practice, Essential Skills Clusters were introduced where deficiency in proficiency were found. These Essential Skills
Clusters are aimed to be completed during the final stages of pre-registration education. One of the Essential Skills Clusters relates to the need for the nurse to be competent at the point of registration and directs that the newly registered nurse 'Demonstrates clinical confidence through sound knowledge, skills and understanding relevant to Branch' (Nursing and Midwifery Council 2007:2). Indeed, the review of the literature would suggest that both practitioners and managers deemed that newly registered nurses were fit for practice (Girot 1992, Meretoja & Leino-Kilpi 2003).

9.4. The military nurse's continued professional development

The DNS has also introduced a rotational programme for newly registered nurses. Nurses undertake an 18 month rotation programme which includes placements in areas such as medicine, surgery and emergency department. Military nurses in the study did allude to the value of such a programme. This participant did not complete her rotation programme until after her first deployment to Afghanistan, but realised how beneficial it would be:

...after my rotation I think, I have got MAU [Medical Admissions Unit] and S4 [acute surgical] next so I think I will have had a nice rounded kind of...I should have got my competencies by then so I would feel better yes...

[Participant nine]

The recognition of a formal consolidation period following registration is seen as good practice is articulated by the Department of Health (2009). However, the document warns that preceptorship is a means by which the practitioner can develop their confidence and competence and not a vehicle to address shortfalls in pre-registration education. The value of a preceptorship programme was supported by study carried out by King's College London where respondents in the study recognised the benefits of preceptorship (Kings College London 2009 [online]).
The emphasis here on ensuring that the newly registered nurse is fit to practice. However, there may be competence issues with those nurses who have been qualified for longer periods of time. This study highlighted concerns over nurses who were in a position of authority not having the clinical skills to support their role. Examples of respondents concerns were as follows:

...on my particular shift we did have someone who was fairly senior but had been out of nursing for so long that it was, left to other individuals on the shift to take the lead.

[Participant six]

...if you are going to an aeromed role you need a little bit of knowledge about everything and it needs to be up to date knowledge and I definitely think, even some senior nurses, would benefit from a phase before a second, third, fourth aeromed deployment...some level of clinical time in different clinical areas...

[Participant seven]

Therefore, the learning needs of all military nurses ought to be acknowledged. Lifelong learning for all nurses is acknowledged by the NMC and its requirement is promoted in the pre-registration phase of training. The Department of Health (2001) also articulates the benefits of lifelong learning for health professionals and advises that lifelong learning will enable the practitioner to keep abreast of the developments in healthcare.

The data from this study suggest the learning needs of the more senior military nurse needs to be acknowledged. The literature review highlighted the different opportunities that adults may avail themselves in order to learn. The acknowledgement of previous experience is an essential component of adult learning (Benner 1984, Kolb 1984) additional factors such as the ability to reflect, gender and social factors will also influence how the adult learns (Benner 1984, Jarvis 2006, Illeris 2008). Clark (2005) suggests that the organisational structure of an organisation may have an effect on learning and suggests a move from a 'dominator' style approach to learning to a 'partnership' approach is more
conducive to learning. Kedge and Appleby (2010) suggest that an appropriate environment for learning will improve a learners desire to learn. This in turn will pave the way for curiosity that which they deem an essential element for competence development.

The military nurses in this study cited examples where learning on operations was not always supported. For example, a nurse who wanted to learn more about caring for patients in the acute environment was not permitted to observe practice in this specialised area:

...I thought I would have the opportunity to and work in other areas and it was an opportunity for me to find out about ITU cos I always had this in mind that I wanted to specialise in ITU, and I thought when I was out there I would be allowed to go and see what ITU do on tour and it would be a good, you know, insight whether I want to do it or not and when I got out there it was very hard I found to get off the ward and try and get into other areas and the nurse in charge wouldn't let me go...

[Participant eight]

This was a disappointment for this practitioner and it was unclear why the nurse in charge had made this decision. It appeared from the dialogue with this participant that the area in which she was working was not busy so there was no real reason why she could have not being allowed to observe in the intensive care unit.

For military nurses there are two main strands for their educational development, These include military and nursing development. Military education and development is spread out through the course of the individual's service and is the same for all military personnel. Completion of these courses will enable the individual to be selected for promotion which comes with additional military responsibility. This aspect of professional development will be discussed later in this chapter.
The military nurse’s nursing development will include military organised courses which are geared to the operational role and general professional development which will enable the military nurse to comply with the registration requirements of the NMC (2008d).

Military medical courses use a variety of media for learning including web based programmes, formal lectures and practice. However, the theory of such courses may not be transferable to specific roles. For example one nurse explained how some of the procedures that she had been taught were not conducive to the environment in which she was working in her deployable role:

...but they advocate listening to the chest and the things you can’t do in the back of a helicopter...

[Participant three]

The DMS also use simulation as part of medical pre-deployment training. The literature highlights the benefits of simulation in nurse education. Objective Structured Clinical Evaluation (OSCE) is a means by which student’s clinical standards can be tested in a safe clinical environment and has the advantages of the ability to test large groups of students in a safe and supported environment. The literature highlighted the merits of this system (Walsh et al. 2009), but the author’s suggested that the OSCE should not be seen as a means by just assessing tasks which does not reflect the true essences of nursing.

Most DMS personnel attended a simulated field hospital exercise prior to deployment. The simulated exercise is called ‘HOSPEX’ is run over four days and gives personnel the opportunity to meet other members of the team that they will be deploying with. It also enables the team to work together to practice the processes involved in the care of patients in a field hospital. Given the short duration of the course, it is not intended that clinical skills will be taught.
During the study there were mixed feelings regarding the benefits of attending HOSPEX:

...The only really useful thing I found about [HOSPEX] that was actually the opportunity to kind of meet up with colleagues that I was be going to be working with...it is just effectively a large hanger basically laid out...that didn't particularly give me anything new...in terms of what I had before...and it was a lot of death by PowerPoint I guess...but for somebody who had not had the exposure I had before...perhaps it would have been more beneficial...

[Participant two]

...I have been on one HOSPEX and it didn't actually...I didn't feel it benefited me at all personally for going out to Afghanistan...it was just like a mock hospital in a big room...and it just...I don't know, I just didn't feel that it was very useful...

[Participant four]

Whilst the value of HOSPEX were questioned, it was apparent that there was potential for changes to be made that would meet the needs of the military nurse embarking on deployment. One participant described how training regarding sirens on operations had been introduced to HOSPEX once she had highlighted that military nurses on deployment were unaware of the significance of these sirens:

...one of the things that I fed back as well which absolutely happens on HOSPEX now and I was quite pleased with my governance head on is...I sent a couple of them up to the tower and I said I want a copy of the...I want on a disc the siren noises...everything that they do on a daily basis which we hear 36 times a day and on HOSPEX now they always have an IED sound...

[Participant one]

Another participant suggests how the inclusion of some clinical elements to HOSPEX would be of use to military nurses who embark on deployments. He articulated some of the additional requirements that intensive care nurses needed
prior to deployment:

...so from the back of my last tour, I put a proposal to the Defence Nurse Advisor to do a training programme for all deploying nurses to go to intensive care whether it be TA or civilian...

[Participant six]

The participant suggested that this could be done in addition to HOSPEX. Therefore, as with OSCE, HOSPEX seems to have possibilities that go beyond just team dynamics and process familiarisation. There is an opportunity for the team to gain other benefits from HOSPEX such as clinical procedures and other elements that are unique to the deployed environment. These considerations will be explored in the next chapter were recommendations for the way forward will be made.

The study has highlighted some of the skills, knowledge and experience that the military nurse will have to have to be proficient with their practice on deployment. The DNS has recognised this and as discussed in previous the previous chapters, the Defence Operational Nursing Competencies have been written and promulgated in 2009. These competencies are based on the achievement of tasks and the demonstration of knowledge. As discussed skills and knowledge need to be supported by experience (Benner 1984, Illeris 2008) and the need to reflect on practice to develop expertise (Carper 1978, Kolb 1984, Johns 1995, Guest et al. 2006)). The personal accounts of respondents in this study supported the advantage of experience. The nurses interviewed described how they felt better prepared for deployments having being on one. They knew what to expect with regards to the environment and also they were able to acknowledge the additional skills that they would require for future deployments:

...Well yes because I had that time of, and working in a specific environment and so the expectations of me were, I could sort of understand them better...

[Participant six]
Another participant who was working as a nurse on helicopters described what other additional experience she would request if she were to be deployed in a similar role in the future:

...Well to be honest I feel that I know what to expect this time, but if I knew in advance that I would be making waves to be getting some A & E experience or really any experience...

[Participant three]

These elements of experiential learning are supported by Fenwick (2000) who proposes that three elements are integral to experiential learning which include reflection, critical theory where culture, self-experience and other factors are included and action theory where thoughts are transferred into action. It was evident from this study that the military nurses constantly reflected on their performance and demonstrated an awareness of their learning needs for the future. How these learning needs would be addressed is of concern as some nurses in the study suggested that they did not get the support from the NHS Trust that they were employed in and some of their civilian colleagues were unaware of their military role. This participant described her experiences:

...and then you come back to the NHS and they all think you have been on a nice holiday for the last four months...and then they joke about it and then they actually do honestly think that we've been on holiday and that we have had an easy time out there...

...they see us someone at the end of the bed...

[Participant four]

The literature supports the fact that nurses need to work in an environment that is conducive to learning. A study by Little (1999) concluded that nurses often felt awkward at questioning practice in their own environment, but felt more comfortable asking questions in a different area of practice. As alluded to earlier, partnership in learning will yield better results (Clark 2005). Therefore, an acknowledgement of the military nurse's role by their civilian co-workers will be
beneficial to the military nurses learning and also their perceived support. Conway (1996) proposes that the culture of an organisation will have an impact on the development of a practitioner. Openness and support of an organisation are deemed pivotal in the development of the practitioner.

Another aspect of the military nurse's role on operations is to care for patients from the host nation. Patients from the host nation during times of conflict can expect treatment as articulated in the Geneva Convention (ICRC 1997). The civilians may also include detainees which may cause issues when military nurses are expected to care for them. As well as language and cultural issues, detainees may provide additional challenges. Such issues were articulated by those taking part in this study:

I found them quite intimidating at times...I suppose I wasn't prepared for it, but they would, it is funny...but they would sort of whisper to themselves as if they were plotting something, plotting their escape and obviously they did not like women so being female...my team were all female, they didn't like that...I think we had like the odd thing like water jugs chucked at us and things like that....they didn't like us nursing them put it that way...

...because they couldn't [their military colleagues] understand why we looking after enemy prisoners of war and I think there was some...they were very negative towards us then...actually weren't very nice to us because we were looking after them..

[Participant four]

This vignette describes how military nurses had to face their own issues when dealing with POWs, but also had to deal with the animosity of other members of the military team.

Another participant highlighted the dilemmas when prisoners of war were admitted who had sustained injuries from their own IEDs and were admitted alongside coalition troops who had sustained injuries in the same event:
...there were individuals that vocalised their thoughts, particularly our location...if you are aware that IED has gone off and we have sustained either deaths or casualties form that incident and then we are dealing with an individual who is a POW who was involved in that incident where we sustained casualties or deaths and he is actually in our location...I could understand that element of animosity because...you know the injuries that we see on our troops... I would suggest that it is human nature but we were never short of individuals who were more than happy or would volunteer to look after POWs...

[Participant one]

Tyrer (2009) in her accounts of Army nurses highlighted the dilemma of looking after POWs. In one account an Army nurse in World War II explained the dilemma in giving German POWs Penicillin which was in short supply and expensive. She posited that some of the nurses found it hard to give this drug to Germans when they 'behaved so badly' (Tyrer 2009: 236). La Salle (2000) in her article on military nurses working in Vietnam cites a military nurse who described that she had to care for POWs and described that many of them were teenagers who did not know the reasons for the war.

In addition to Benner's work on the proficiency development of the nurse, Duke et al. (2009) describes the need for cultural competency and safety which are embedded in generic competencies. Duke et al's paper articulated the fostering of knowledge and theoretical conscript of culture that are a requirement for the practitioner who is required to care for patients that are from a different culture from their own. Whilst the intricacies of this proposal are outside of the remit of this study, the issues highlighted by the participants would suggest that there is a learning deficit in this area.

In summary, the DNS has recognised that there is a requirement for the military nurse to have additional skills for practice on deployment, the training and experience identified is not always relevant to the practice environment on deployed operations. The DMS do use a plethora of teaching methods for
professional development which include both formal and simulated learning. The participants in this study suggested how these learning opportunities could be developed further to address their skills and knowledge requirement for deployment. The additional responsibility of caring for patients from the host nation, including POWs brought unique challenges to the military nurse. As discussed, reflection is a pivotal part of learning and the nurses in this study talked about their personal reflection and how this helped identify opportunities to address deficiencies in skills prior to subsequent deployments.

9.5. **Reflection following deployed operations**

Johns (2000) defines reflection as 'a window through which the practitioner can view and focus self within the context of his/her own lived experience in ways that enable him/her to confront, understand and work towards resolving the contradictions within his/her practice between what is desirable and actual practice' (Johns 2000 34). Reflection is endorsed by the NMC as a means by which the practitioner can assess the benefits of a learning activity as part of their CPD (Nursing and Midwifery Council 2008d) and is seen as a way to enhance development. Schön (1991) advocates that practitioners reflect in action whereby action is taken or altered at the time at the time of the event or reflect on action whereby the practitioner reviews and may alter practice after an event. McClure (undated) advocates the use of a reflective diary which will enable the practitioner:

- To describe key events in your practice.
- To identify key elements in your practice.
- To engage in focused evaluation of recurring themes.
- Reflect on what may have become habitual.
- Develop and appraise action taken.

(McClure undated:5)
One participant described keeping a reflective diary whilst on deployed operations, but for other participants said that partaking in this study enabled them to discuss and reflect on their experiences as there was limited opportunity for them to do this when they get back from deployment. As discussed earlier civilian co-workers are not always aware of the roles that military nurses undertake on deployed operations which may have an effect on the professional support the military nurse gets. There may also be barriers to reflection. Platzer et al. (2000) in their study found that previous educational experience where the teacher takes the lead for learning and working in a culture that is not open and does not allow challenge to authority will not be conducive to group reflection. As the majority of military nurses go out as singletons on operations little opportunity exists for them to formally get together to discuss their experiences which the author believes could take the form of clinical supervision. The Nursing and Midwifery Council (Nursing and Midwifery Council 2008a: 1) cites the NHS Management Executive (1992) definition of clinical supervision as:

'...a formal process of professional support and learning which enables individual practitioners to develop knowledge and competence, assume responsibilities for their own practice and enhance consumer protection and safety of care in complex situations'

For military nurses, a Surgeon General’s Policy letter (not in the public domain) articulates the requirement for clinical supervision for nurses and this could be a means of nurses discussing experiences collectively following a deployment. This could promote excellence in military and could enable of sharing of good practice such as standardisation of kit. Benner et al. (1997) highlight the benefit of sharing knowledge and the benefits from the 'pooled experience of other clinicians' (Benner et al. 1997:16BB).
Military nurses were aware of the mechanism for welfare support when the returned home from deployment. Such support also included psychological and medical support. It was apparent that there was no arena for nurses to share and discuss their personal experiences which included clinical practice. One nurse highlighted how she had raised some concerns with a governance team, but she was not confident that any action would be forthcoming:

..on my original signal [a form of written information] it said personal being were encouraged to report back...but I asked my hierarchy and when I got back to whom I should direct this to and nobody could tell me categorically who I should write to...while I was out there the ...governance team came out and I did know a couple of personnel on that who bounded of the aircraft at 4 in the morning, I was on shift at the time so I went to pick them up...they asked me if I was having a marvellous tour...so I then did write a...I don't feel like the average person on the ground is given the opportunity to write a report down or make any points...you can make your points through your chain of command obviously...as normal, bit you don't really hear anything about it or if anything has changed...I think that makes people despondent then because they will not report anything that could benefit anybody else if they are not encouraged to do so...

[Participant three]

In summary, there is a requirement for support for military nurses when they return home. The Military Services have recognised the need for psychological and welfare support when they military personnel return home and provision is in place for debriefing. The participants in this study were aware of the services available and how to access them. What is not available is a forum for military nurses to share practice experiences. Sacnnel-Desch (2005) highlights the importance of military nurses sharing their experiences.

Whilst the participants identified some lack of knowledge, skills and experience, all respondents said that they would be happy to be deployed again. The value of the learning experiences that nurses have on deployed operations cannot be
ignored. The value of such experiences were articulated in the literature (Hagstad 2005, Philpott 2007, Snow 2007).

9.6. The military rank dilemma

Participants in the study referred to the issue that rank can cause on deployment. All military nurses hold rank. All newly registered nurses will hold the rank of corporal or an equivalent rank. Nurses joining the services with post-registration experience and/or post registration qualification will be given some additional seniority in rank. As the participants suggested, rank does not always reflect the nursing experience of the individual. This can cause issues in two ways. Firstly, an individual may be senior in rank but will not have the clinical experience when working in a particular area. Secondly, a nurse who is subordinate in rank may have clinical experience. Lamb (2006) describes in her article on Critical Care Aeromed Support how aeromed teams are made up of different ranks, but the individual with the most relevant experience will act as team leader in the flight. Whilst this appears to be good practice, such acknowledgment of nursing experience does not always apply in the deployment setting. Dahl and O’Neal (1993) in their study of nurses who were involved in Operation Desert Storm described how nurses had a lack of faith in the command and control, lack of organisation and a lack of communication form leaders and managers. Participants referred to this issue of rank at field hospital ward level. For example one participant highlighted how the nursing officer in charge of the ward did not have the appropriate deployment experience:

...they might of been in the Service a lot longer than I had, but still have never deployed so we were all really in the same boat, whether we were new, or quite old to the Service...

[Participant four]

Another participant highlighted how he was left to manage a ward without having the appropriate experience:
Not ward management no...no...I had kind of been in the med centre I had being sort of the senior medical, senior military personnel within the med centre but not in the ward environment no...

[Participant two]

The military nursing services fought to have rank so that they could be credible amongst the other members of the armed services (Tyrer 2009), but with rank can cause issues and conflict.

Military duties are also associated with rank. The more senior rank an individual hold relates to the military duties that an individual is expected to undertake. Military nurses in both parts of the study referred to the lack of experience in carrying out these duties. Duties included undertaking the role of a guard commander were they would be responsible for leading and managing a guard force. The military nurses that were interviewed highlighted that despite being trained to undertake this role, there were limited opportunities to gain experience in this role in their peacetime role. Griffiths and Jasper (2007) describe the conflicts that can arise with the dual role of the military nurse; that of being a serviceman and a nurse.

Therefore, military nurses have to undertake roles demanded by the military which are associated with their rank and that of the nuances of nursing in a deployable situation. Military rank may cause confusion when an individual is deemed to be senior by the military services, but does not have the relevant clinical experience for their deployable role.

These factors in the military nurses development contributed to the core category (see fig 8.1).
9.7. The research question

The research question posed was:

'THE MILITARY NURSE'S COMPETENCE TO PRACTICE ON DEPLOYED OPERATIONS: HOW WELL PREPARED ARE THEY?'

The objectives of the study were as follows:

- Do military nurses have the requisite skills to ensure competence to practice when they are on deployed operations?

- Does previous military nursing experience equip nurses to undertake their military nursing role more effectively?

- What impact does the current pre-deployment training have on the nurse's competence to work in a military environment?

- Are military nurses able to adapt skills learned in their peacetime role to those required on an operational setting?

The objectives were explored using both parts of the study. The only objective not specifically explored was whether or not the mode of training had an effect on the nurse's ability to practice in a deployable setting. Whilst this objective was not specifically explored, the issues around knowledge, skills and experience that were related to the deployable role were relevant to all those nurses who took part. An analysis of the participant's year of registration would suggest that that the mode of training was not relevant to the issues they raised.

Whilst the military nurses in this study had the underpinning knowledge to care for patients in their charge, experience and lack of knowledge regarding the care of specific groups of patients such as paediatrics was lacking. The participants in
part two of the study suggested that their peacetime role did not give them the exposure to the types of patients that they would be expected to care for on deployment. All participants in the second part of the study confirmed that they would feel better prepared for subsequent deployments and were able to realise the knowledge and skills deficits that they had.

9.8. **The theoretical framework**

The data from this study and the literature that has been reviewed has enabled the researcher to develop a theoretical framework that can be used to test the theory described in the core category. The schematic description of the theoretical framework is at figure 9.1.
Military nurse who is registered who may have an additional qualification

Peacetime Role
Rank
Previous deployments
Pre-deployment training

Deployment

Reflection/Supervision

Improved Competence on Operations

Fig 9.1. - Theoretical Framework

9.8.1. Experience

Benner (Benner 1984) suggests that improved proficiency in nursing is related to the acquisition of experience. Benner describes a competent nurse as having been 'on the job two to three years' (Benner 1982a: 404). Whilst this could be
construed as been in one area of clinical practice, Benner clarifies this later when she talks about the expert practitioner and defines experience as not just the length of time a practitioner has been in practice but is related to a amalgam of different experiences. She goes on to suggest that clinical practice is more important than theory alone. However, Khomeiran et al. (2006) highlights the importance of underpinning theory to ensure safe deliver of care.

Therefore, from the military nurse's perspective, they gain experience in practise but given that they are a mobile workforce due to postings and deployment their experience may be broader than a registered nurse who is employed in the same post for a number of years although this cannot be confirmed by the data from this study. Also, social factors will have an influence on the military nurse's learning development. Whilst the advantages of experiential learning have been articulated in the literature review (Benner 1984, Fenwick 2000), the effect of frequent changes in the military nurse's practice environment, due to postings and deployment, may affect their ability to integrate into the team. This may have a negative effect on the learning potential of a particular learning environment (Cope et al. 2000).

As discussed, deployments differ and the illnesses and injuries that servicemen suffer will be dependent on the type of warfare that is taking place. The military nurse will need additional skills to care for patients that they encounter on different operations. Nurses in this study were able to reflect on their experiences and recognise any skill deficits they had. Definitions of competence, including those of the participants in this study include knowledge, skills and experience. The military nurse may have the knowledge and experience but these factors may not apply to the cohort of patients that they are required to care for in peacetime compared to those they have to care for on deployment. Therefore, pre-deployment training has to be relevant to their deployment role.
9.8.2. Reflection

This study enabled the military nurses to reflect on their deployment experiences in an interview setting. Reflection is essential aspect of learning from experience (Kolb 1984, Johns 1995, Johns 2000). Nurses used reflection in the interview setting to provide examples on how they could have enhance their competency on operations and also what the organisation could do to meet the needs of the practitioner. The author suggests that it would be good practice to promote the need for reflective practice. This was suggested as good practice by the respondents in part two of the study.

9.8.3. Supervision

The need for clinical supervision for military nurses is promoted by the DMS [not in the public domain] but this is not used for nurses before, during or after deployment. Supervision is yet another way for nurses to realise their training needs. The majority of military nurses deploy on a singleton basis and return to their peacetime role where support may be lacking for them to articulate their concerns. There would be benefits from structured supervision for military nurses. Robbins (1999) suggests that the feasibility of including debriefing into supervision needs to be explored.

Feedback from supervision and possibly from the military nurse's reflective accounts could be used to inform the Defence Operational Nursing Competencies to ensure that they are realistic and achievable and also to ensure that military nurses are being deployed with the appropriate competencies.

In summary, Benner's work highlights the need for nursing experience for the development of proficiency from novice to expert in nursing practice. Given the changing roles and responsibilities of military nurses, the author suggests that
reflection and supervision are pivotal in ensuring that the military nurse is fully competent to practice on deployed operations.

Military nurses in this study articulated the knowledge, skills and experience deficits that they had in their deployable role. This was due to not being in the appropriate clinical area in peacetime, pre-deployment training skills that were not transferrable in the operational setting and having to deal with issues and roles that were related to their military rank. They also recognised the training opportunities that could be used to go towards meeting this gap. The promotion of the use of reflection and supervision could be used as a vehicle to recognising and capturing concerns about nursing competence on deployed operations.

9.9. Summary

The military nurse's competence to practice on deployed operations will be dependent on factors such as their peacetime experience, their previous deployment experience, their continued professional development and their action following a deployment experience. As members of the military services, military nurses also have roles and responsibilities associated with their rank. The ability to function in these roles will be dependent on the training and experience that they have had. The opportunity to gain clinical nursing and military experience will be dependent on were the nurse is working in their peacetime role.

The military nurse's peacetime role may not be relevant to their operational role. For example nurses working in primary care may be required to work on wards in the operational setting. Military nurses may have been given additional training to work in areas such as intensive care and emergency departments. However, their training may not have exposed them to the patients that they will be required to care for in an operational environment such as paediatrics and burns. Moreover, some of the injuries that they see, such as patients with multiple

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amputations, they will not see in any peacetime role. Therefore, it could be argued that pre-deployment preparation may not prepare the military nurse for all eventualities they encounter in their operational role.

The DMS have recognised that they have a responsibility to ensure that nurses are prepared for their operational role. The development and publication of the Defence Operational Nursing Competencies in 2009 aimed to ensure that military nurses do not deploy unless they have achieved certain core competencies. Also, nurses are required to attend a simulated field hospital exercise prior to deployment. Participants in this study gave mixed responses to these initiatives and felt that they could be made more relevant to their operational role.

Military rank will also have an impact on nursing practice in the operational setting. Whilst military rank does not reflect a military nurse's clinical experience, it does give authority. This can cause conflict when a subordinate nurse has more clinical experience than their superior and the senior military nurse's lack of deployment and clinical experience may have an adverse effect on their credibility.

The study informed the development of a theoretical framework which incorporates the facets that military nurses require to improve their competence in their deployable role. Whilst military nurses may not have continuity of experience due to postings and deployments, such turbulence will expose them to different clinical experiences. This may provide a broad clinical portfolio for the military nurse. The findings from this study suggest that this will enable the military nurse to feel more prepared for their deployable role.

The importance of structured and supportive reflection is acknowledged in this study. Whilst the DMS have policies in place for clinical supervision they do not address how supervision can be implemented in the military nurse's deployable
role. The study highlighted the lack of support that military nurses received from their civilian colleagues when they returned from deployment and structured supervision may be of benefit.

9.10. Conclusion

This two part study aimed to explore the competence of military nurses to undertake their role on military operations. A grounded theory approach was used to analyse the data from the survey used for part one of the study and for the interviews in part two of the study. The use of grounded theory enabled the researcher to develop theory and recommendations in light of the findings.

Analysis of data from both parts of the study suggests that nurses do not feel fully prepared for their operational role in respect of both their military and nursing roles. Moreover, more than 50 percent of the respondents indicated that they had undertaken new tasks or roles on deployment for which they had not been trained to undertake. The findings suggest that competence in the military nurse's deployable role will be dependent on their peacetime role and deployment experience. Whilst training has evolved over the period of this study, the findings of this study would suggest that certain areas of competence deficit need to be addressed. These include skills such as venepuncture and cannulation and clinical experience in burns and paediatrics. However, it is acknowledged that given the changing nature of warfare, it may not be possible to address all skills and competence issues that are required for deployment.

Participants in this study were able to acknowledge the deficits in their knowledge, skills and experiences and some described how they compensated for this deficit. The findings would suggest that the military nurse's competence to practise in their deployable role may be dependent on their peacetime role and the opportunity to achieve the requisite competencies that they require.
As discussed in the literature review, there is a dearth of literature pertaining to military nursing and most relates to personal accounts. This study is unique as there has been no study to explore the competence issues of military nurses on deployment. It is hoped that this study will help promote military nurse research and publication.

9.11. Limitations of the study

It is acknowledged that that the auxiliary military nursing services and contracted civilians are used on deployment, but as such this professional group were not included due to factors such as the focus of the study, time and financial constraints.

Over the period of this study pre-deployment training has evolved, the Defence Operational Competencies have been published so it is too early to say what impact this will have on pre-deployment preparation for military nurses.

9.12. Recommendations

As a senior nurse in the PMRAFNS, the author is keen to ensure that military nurses are afforded the necessary training and experience to ensure competence in their military role. To this end, the author is intent on promoting that the findings of this study are used as a scaffolding to develop appropriate training and that clinical practice placements are assessed for their value and relevance to the military nurse’s role. Given the constant changes in warfare tactics and associated battlefield injuries, it is necessary for pre-deployment training to be dynamic to ensure that military nurses receive adequate training for their operational role. However, it is acknowledged that it may not be possible to prepare military nurses for all eventualities. The findings from this study would suggest that military nurses will adapt their practice to meet the needs of the patients in their care on deployment. This may include delegation and learning
from others. The Defence Operational Nursing Competences can be used as a check list and guide for practitioners and managers but will not necessarily mean that a military nurse is competent. There will be a need for training to be consolidated with practice experience.

Support in practice on operations may be possible and this may not have to be facilitated in the deployment location. Internet connectivity is available in most locations and this could be used as a medium for support.

Knowledge interdependence with NHS colleagues does need to be embraced and could lead to practice development in military and other health care sectors. Indeed, collegiality and sharing of best practice across the nursing professions, including non-Governmental organisations, has yet to be realised.

Taking into account the findings of the study the author would recommend the following:

- The theoretical framework, developed from the core category in this study, is used to inform the design of pre-deployment training.

- The use and relevance to the operational deployment of the Defence Operational Nursing Competencies are evaluated as this study suggests that not all military nurses are familiar with them. Also, some of the competencies are difficult to achieve in the peacetime role of military nurses.

- A further study is undertaken to assess the usefulness of peacetime military nursing posts in preparing the military nurse for their deployable role as the findings from this study would suggest that not all peacetime military nursing placements are congruent to the military nurse’s role on deployment.
• The opportunity for senior nursing staff to update clinical skills before deployment is explored as the findings from this study would suggest that seniority in rank does not always reflect clinical experience.

• The feasibility of structured supervision for nurses on and or after deployment is explored as nurses that participated in this study felt that this would be good practice.

• Efforts are made to inform NHS staff, especially in MDHUs, of the role of the military nurse on deployment and the need for support on their return. Participants suggested that their NHS colleagues did not always appreciate the roles that they undertook on deployment.

• The sharing of military medical and nursing experiences in the NHS environment is promoted as deployment experience may be relevant to the NHS environment. However, this has not been explored in this study.

• A training evaluation is undertaken regarding the relevance of HOSPEX to the military nurse's operational role as the data from this study would suggest that the HOSPEX experience is not always relevant to the military nurse's role on deployment.

9.13 Dissemination and recommendations for further research

A copy of this thesis will be sent to the Defence Medical Deanery and it is hoped that a research paper will be published in due course. Given the nature of the study, the Journal of the Royal Army Medical Corps will be approached in the first instance for publication.

The author suggests that the following topics arising out of this study may be appropriate for further research:
• The contribution of military nursing to patient outcomes on deployment.

• The psychological preparation of DMS personnel in respect of dealing with unknown outcomes of conflict.

• The standardisation of medical kit on deployment.

• The author has been invited to give a presentation of the findings of this study to the Military Directors of Nursing in Jan 2011.


This journey started with the author’s concern that nurses were not adequately prepared for their deployable role. There have been periods of frustration especially with the delays in ethical clearance. Nevertheless, the author has enjoyed the study. It has been a rewarding experience by giving military nurses the opportunity to talk about their issues. Some interviews evoked both emotion and humour, but without exception, the participant’s focus was on the care of the patients in their charge. Moreover, all participants said that they would be happy to deploy again. Hopefully, the participants have found the experience rewarding and feel positive about a senior military nursing officer taking an interest in their concerns.

The use of grounded theory as a research approach was new to the author. However, the underpinning theory was well structured whilst not being too prescriptive. This approach has led to the development of a theoretical framework and recommendations that are hoped will be used to the benefit of the military nurse.

Triangulation in this study worked well. It enabled the author to target all military nurses by the use of a survey which provided a platform for qualitative analysis.
The findings suggest that the use of triangulation did provide completeness of the data from part one of the study (Foss & Ellefsen 2002).

The author's personal interest in the preparation of military nurses for deployment has developed during the course of this study. Further work into the support of military nurses when they return from deployment is of interest and the author sees this as essential.

This study is a unique project which will contribute to military nursing research. Indeed, there is a dearth of such literature (see chapter 3), both in the United Kingdom and Internationally. The utilisation of the findings from these study are important in ensuring that military nurses are as competent as possible to undertake their role on deployment.

The findings and recommendations of this study apply to military nurses. However, the author believes that there could be similar issues for nurses working in other areas of healthcare. Therefore, the findings of this study may provide rich data for further studies into the competence of all nurses.


Mail Online (1999) *British troops on same ward as Taliban: Soldiers' fury as wounded wake up next to the enemy* [online] The Mail London Available from


Nursing and Midwifery Council (2004b) Standards of proficiency for pre-registration nursing education, NMC, London.

Nursing and Midwifery Council (2005) Consultation on the proposals arising from a review of fitness for practice at the point of registration, NMC, London.


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Appendices

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Dear Colleague,

I am carrying out a research project regarding competence to practise on deployment and would ask if you would complete this questionnaire.

What is your current speciality/role (please tick):

- Emergency Nursing
- Intensive Care Nursing
- Theatre Nursing
- General
- Primary Care Nursing
- CPN
- Other

Registration:

What year did you register as a nurse (year) 

What is your rank (please tick):

- Cpl
- Sgt to WO1
- 2nd Lt to Maj
- Lt Col and above

Your Gender (please tick):

- Male
- Female
Appendix one

How long have you been in military Service: [Yrs]

How long have you been in the Defence Nursing Services: [Yrs]

Frequency of deployment (please indicate the number of times you have been deployed in the box):

IRAQ □  Afghanistan □  Bosnia □  Other □
What types of patients did you care for on your deployment and how well prepared did you feel for each situation (Please indicate location and date. If extra boxes are needed please photocopy this sheet):

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Did you conduct any task or role that you had not done before?

Yes/No

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Did you conduct any task or role that you had not done before?

Yes/No

If yes please indicate task/role below:
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**Did you conduct any task or role that you had not done before?**

**Yes/No**

**If yes please indicate task/role below:**

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I am interested in exploring nurses' experience on deployment. Would you be willing to participate in an interview to explore your experiences? If you are willing to participate, please complete the following information:

Rank: Name: Unit: Contact No: E-Mail:

and return it to the address below:

Wing Commander Steve Beaumont  
SO1 Medical Personnel Policy  
Headquarters Air Command  
Nimrod Block, First Floor  
Royal Air Force High Wycombe  
Naphill  
Buckinghamshire  
HP13 4UE  
Tel: 01494 494306  
E-Mail: S.Beaumont@surrey.ac.uk

Thank you for your interest
DEPLOYMENT DATA CAPTURE QUESTIONNAIRE [Royal Navy]

Dear Colleague,

I am carrying out a research project regarding competence to practise on deployment and would ask if you would complete this questionnaire.

What is your current speciality/role (please tick):

- Emergency Nursing
- Intensive Care Nursing
- Theatre Nursing
- General

Primary Care Nursing
- CPN
- Other

Registration:

What year did you register as a nurse (year)

What is your rank (please tick):

- LNN
- PONN to WO
- Lt to Cdr
- Cdr and above

Your Gender (please tick):

- Male
- Female
Appendix one

How long have you been in military Service: [Yrs]

How long have you been in the Defence Nursing Services: [Yrs]

Frequency of deployment (please indicate the number of times you have been deployed in the box):

IRAQ [ ] Afghanistan [ ] Bosnia [ ] Other [ ]
What types of patients did you care for on your deployment and how well prepared did you feel for each situation? (Please indicate location and date. If extra boxes are needed please photocopy this sheet):

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Did you conduct any task or role that you had not done before?

Yes/No

If yes please indicate task/role below:

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Yes/No

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Buckinghamshire
HP13 4UE

Tel: 01494 494306
E Mail: S.Beaumont@surrey.ac.uk

Thank you for your interest
Appendix one

DEPLOYMENT DATA CAPTURE QUESTIONNAIRE [Royal Air Force]

Dear Colleague,

I am carrying out a research project regarding competence to practise on deployment and would ask if you would complete this questionnaire.

What is your current speciality/role (please tick):

- Emergency Nursing
- Intensive Care Nursing
- Theatre Nursing
- General
- Primary Care Nursing
- CPN
- Other

Registration:

What year did you register as a nurse (year)

What is your rank (please tick):

- Cpl
- Sgt to WO
- Fg Off to Sqn Ldr
- Wg Cdr and above

Your Gender (please tick):

- Male
- Female
Appendix one

How long have you been in military Service: 

How long have you been in the Defence Nursing Services: 

Frequency of deployment (please indicate the number of times you have been deployed in the box):

IRAQ □  Afghanistan □  Bosnia □  Other □
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Deployment 3: Location: Date:

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Thank you for your interest
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Appendix three

Ministry Of Defence

Application for MoDREC Approval
Document Description:

Application for MoDREC approval for scientific research.

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<td>First issue</td>
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This document will be subject to version control by:

SIT-Sec2
01.K.46
MoD Main Building
London
SW1A 2HB

Telephone: 0207 218 0206
Fax: 0207 218 9948
Email: bob.hale343@mod.uk
Ministry of Defence Research Ethics Committee (MoDREC)

APPLICATION FOR MoDREC APPROVAL

Please read the notes in “Procedure for obtaining ethical approval from the Ministry of Defence Research Ethics Committee (MoDREC) for research involving human participants” before completing this form. Type in the grey boxes, which will expand automatically to encompass your text.

1. TITLE OF STUDY

Competence to Practise On Deployed Operations: The Experiences of British Military Nurses

2. NATURE OF PROJECT

To identify whether military nurses receive the appropriate clinical nursing experience prior to undertaking deployment to ensure competence. This study will also explore how nurses are able to transfer nursing skills learnt in a peacetime environment to that of an alien and possible hostile environment. The project will be in 2 parts. Part 1 will be a survey in the form of a questionnaire. The survey will provide biographic data and information regarding deployments such as frequency of deployment and exposure to differing clinical environments. Participants for Part 2 will also be identified in Part 1. Part 2 will take the form of in-depth interviews of actual deployments experiences. Separate MoDREC approval will be sought for Part 2.
3. INVESTIGATORS

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<td><strong>Grade/Rank:</strong> Wing Commander</td>
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<td><strong>Department:</strong> Defence Medical Rehabilitation Centre</td>
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</tbody>
</table>
| **Establishment:** Defence Medical Rehabilitation Centre  
  Headley Court  
  Surrey  
  KT18 6JW |
| **Telephone:** 07809 5666612 |
| **E-mail:** stevbeau@dscarm.mod.uk |

<table>
<thead>
<tr>
<th>3b. Other investigators / collaborators / external consultants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Professor K Bryan, Professor of Clinical Practice, Faculty of Health and Medical Services, University of Surrey. Dr M Volante, Centre for Research in Nursing and Midwifery Education, University of Surrey.</td>
</tr>
</tbody>
</table>

| 3c. Name of the Independent Medical Officer (if applicable) |
4. PREFERRED TIMETABLE

4a. Preferred start date: Part 1 – The study is ready to start as soon as MoDREC approval is given. Participants will be given 4 weeks to return the questionnaire. Interpretation of data will be approximately 8 weeks.

4b. Expected date of project’s completion: Part 1 – It is envisaged that Part 1 will be completed by the autumn 2008.

5. SPONSOR / OTHER ORGANISATIONS INVOLVED AND FUNDING

5a. Department/Organisation requesting research:

The study is funded and supported by the Defence Postgraduate Medical Deanery. The study is part-time and forms part of a doctoral programme registered at the University of Surrey.

5b. If you are receiving funding for the study please provide details here:

Funding is being provided by the Defence Postgraduate Medical Deanery. Funding is applied for on an annual basis. The cost of materials for part 1 of the study has also been granted by the Defence Postgraduate Medical Deanery. Funding for relevant study days is applied for as required.

5c. Please declare any competing interests: I am aware of no competing interests

6. OTHER REC APPROVAL

Has the proposed study been submitted to any other reviewing body? If so, please provide details:

No
7. PURPOSE OF THE STUDY

TO IDENTIFY COMPETENCE ISSUES OF BRITISH MILITARY NURSES ON DEPLOYED OPERATIONS

Introduction

The Defence Medical Services provide medical services to military personnel in times of conflict and peace. Personnel in the DMS include doctors, nurses and allied health professionals. Apart from caring for Servicemen and their dependants and other entitled personnel in peacetime, DMS personnel are required to prepare to provide medical support in times of conflict as part of their operational role. This study will concentrate on military nursing personnel employed by the Navy, Army and Royal Air Force who have recently supported military operations in Iraq and Afghanistan.

Apart from two military hospitals located overseas in Cyprus and Gibraltar, military secondary care nurses are mainly employed in Ministry of Defence Hospital Units (MDHU) which are integrated in NHS Trusts. Nurses are employed in a variety of locations such as military managed units and wards and also in specialised areas in the hospital such as emergency departments, theatres and intensive care. In essence the objective is to expose nurses to nursing practise that will enable them to fulfil their operational role.

Aim

The aim of the study is to identify what factors enable nurses to care for patients in areas of conflict.

Scope
The study will concentrate on the experiences of nurses regarding their military nursing competence whilst on deployment in Iraq and Afghanistan. It will not address any issues regarding general military competencies.

Objectives

The objectives of the study are to address the following questions:

- Do nurses have the requisite skills to ensure competence to practise when they are on deployed operations?
- Does the mode of training (before or after PK2000) have any effect on whether these nurses are able to adapt to nursing in an operational environment?
- Does previous military nursing experience equip them to undertake their military nursing role more effectively?
- Do military nurses who have previously worked in military hospitals feel better equipped to undertake their operational roles?
- What impact does the current pre-deployment training have on their competence to work in an operational environment?
- Are military nurses able to adapt skills learned in their peacetime role to those required in an operational setting?

In essence does the current peacetime training and experience prepare military nurses to fulfil a unique and often dangerous operational role? Exploration of the literature highlighted a gap in this area. Indeed, there has been no research carried out in the UK regarding the issue of the competence of military nurses.

PURPOSE OF STUDY

The definition of competence is not clear. There has been little research carried regarding
how military nurses are able to transfer skills from a peacetime to an operational role. The literature refers to lack of training for such roles and the need for the practitioner to be flexible and adaptable. This may not be straightforward due to the focus on gaining specialist nursing skills. The literature does not provide information on how the nurse may develop and learn in the operational setting. Military nurse are now deployed on a regular basis given the current operational tempo.

The questionnaire will provide a platform for a survey for part 1 of this research study. It will provide biographic data such as rank and Service. It will also provide an opportunity to explore the relationship between the nurse's peacetime role and the patients they care for in the operational theatre. The frequency of deployments of particular nursing groups will be identified.

A list of references are at Annex A

8. STUDY DESIGN, METHODOLOGY AND DATA ANALYSIS

PART 1: QUESTIONNAIRE TO DETERMINE RESEARCH GROUP

The questions for the survey are enclosed with this protocol. The questionnaires are the same but have variations to take into account the different rank structures of the single Services. The questionnaire has been peer reviewed by military nurses who have been on deployment. The questionnaire will act as a survey and the questions posed will provide biographic and other data as detailed below.

The data will be analysed using SPSS. The data will be interrogated to answer the following questions:
- Relationships between rank, gender, Service and number of deployments.
- Relationship between the role of the practitioner, e.g., primary and critical care, and number of deployments completed.
- The mode of the year of qualification which will provide information regarding the type of nurse training system the practitioner on deployment had completed.
- The mode of the type of patient cared for e.g. trauma, surgical, medical etc.
- The frequency that types of nursing groups go on deployment.
- Identification of participants for Part 2 as the questionnaire asks if respondents would like to participate.

PART 2: Interviews and qualitative analysis (separate application for MoDREC approval will be sent)

9. ETHICAL CONSIDERATIONS

Participants will be identified following discussions with the relevant single service manning departments who will be able to provide the names and contact details of individuals. The questionnaire will be sent to named individuals. Names will be anonymised and individuals will be allocated a number. An information leaflet (see attached) will be included with each questionnaire and the participant will be able to contact Wing Commander Beaumont if more information about the study is required.

It is unlikely that anyone will be distressed by the questionnaire. However, the participant may see some benefit in applying to take part in Part 2 of the study. It is assumed that consent is given by the participant on completion and return of the questionnaire.

10. PARTICIPANTS TO BE STUDIED

Number of participants: All serving military nurses will be sent the questionnaire

(n = 1364)

Lower age limit: N/A
Upper age limit: N/A

Gender: Male and female

Please provide justification for the sample size: Sending questionnaires to all military nurses will enable suitable participants are identified for part 2 of the study as not all military nurses may have been on deployment. Moreover, the researcher is not aware of any similar survey being sent out to military nurses.

11. SELECTION CRITERIA

All serving military nurses.

12. RECRUITMENT

12a. Describe how potential participants will be identified:

Participants will be identified through the personnel departments of the 3 single Services.

12b. Describe how potential participants will be approached:

A questionnaire will be sent to all military nurses identified by the personnel departments. Questionnaires and accompanying information letters will be sent by post to the individual.

12c. Describe how potential participants will be recruited:

As above. There will be one mail shot with a return date of questionnaires being 21 days.

13. CONSENT

13a. Please describe the process you will use when seeking and obtaining consent:

An information leaflet will be enclosed with each questionnaire that will give the contact details of Wing Commander Beaumont to enable participants to ask any questions before completing the questionnaire. Consent will be assumed for the survey if the participant
returns the questionnaire

A copy of the participant information sheet and consent form must be attached to this application. For your convenience proformas are provided at the end of this document. These should be filled in, modified where necessary, and attached to the end of your application.

13b. Will the participants be from any of the following groups?

Under 18: No
Prisoners: No
Mental Illness: No

Subordinates: Yes
Pregnant or nursing mothers: If still serving
Learning disabilities: No

How will you ensure that participants in the groups listed above are competent to consent to take part in this study?

All military nurses are deemed competent to take part in part 1 of the study. The possibility of coercion by superiors distributing the questionnaires will be avoided as the questionnaire will be sent directly to named individuals.

13c. Are there any special pressures that might make it difficult for people to refuse to take part in the study? How will you address such issues?

Not that the research team are aware of. Postal questionnaires will mitigate against this risk.

14. PARTICIPANT INVOLVEMENT: RISKS, REQUIREMENTS AND BENEFITS

14a. What are the potential hazards, risks or adverse effects associated with the study?

Give that this part of the study is a questionnaire potential hazards, risks or adverse effects associated with the study has been considered and thought to be negligible.

14b. Does your study involve invasive procedures such as blood taking, muscle biopsy or
the administration of a medicinal product? No

If so, please provide details:

14c. Please indicate the experience of the investigators in the use of these procedures:

14d. If medical devices are to be used on any participant, do they comply with the requirements of the Medical Devices Directives?
N/A

14e. Please name the locations or sites where the work will be done:

Questionnaires will be sent to the individual at their contact address.

14f. Will group or individual interviews / questionnaires discuss any topics or issues that might be sensitive, embarrassing or upsetting? If so, please list these topics and explain how you will prevent, or respond to, volunteer discomfort:

The questionnaires may cause upset as they are asking an individual about their deployment. Such deployments may have been traumatic. If this is an issue, the individual will be encouraged to seek support. Conversely, the participant may find it therapeutic.

14g. Is it possible that criminal or other disclosures requiring action (e.g. evidence of professional misconduct) could take place during the study? If yes, give details of what procedures will be put in place to deal with these issues:

No

14h. Please describe any expected benefits to the research participant:

The opportunity to participate in in-depth interviews in part two of the study will enable the participants to tell their own stories about their experiences whilst on deployment. It is
hoped that any competence issues will be identified on completion of part 2 of the study.

14i. Under what circumstances might a participant not continue with the study, or the study be terminated in part or as a whole?
N/A in Part 1.

15. FINANCIAL INCENTIVES, EXPENSES AND COMPENSATION

15a. Will travelling expenses be given?
N/A

15b. Is any financial or other reward, apart from travelling expenses, to be given to participants? If yes, please give details and justification:
No

15c. If this is a study in collaboration with a pharmaceutical company or an equipment or medical device manufacturer, please give the name of the company:
N/A

16. CONFIDENTIALITY, ANONYMITY AND DATA STORAGE

16a. What steps will be taken to ensure confidentiality (including the confidentiality and physical security of the research data)? Give details of the anonymisation procedures to be used, and at what stage they will be introduced:
Participants will only include their name on the questionnaire if they are willing to participate in Part 2 of the study. If names are included they will be separated from the answers to the questions on the survey. Respondents will be number coded. Data interpretation will be carried out on Wg Cdr Beaumont's laptop computer and stored on a CD which will be kept in a secure place. Professor Bryan and Dr Volante will have access to coded data and results only.

16b. Who will have access to the records and resulting data?
Professor Bryan, Dr Volante and Wg Cdr Beaumont

16c. Where, and for how long, do you intend to store the consent forms and other
Information received from the questionnaire will be saved for 100 years on CD and will be locked in a secure location under the control of Wing Commander Beaumont. On leaving the data will be archived at the Defence Deanery.

17. PARTICIPANT INFORMATION SHEET AND CONSENT FORM

The participant information sheet and consent form should be composed according to the guidelines and submitted with this form.

The following, where applicable, are attached to this form (please indicate):

- [✓] Participant Information Sheet
- [N/A] Consent Form
- [N/A] Appendix relating to medicines and/or healthcare products
- [N/A] Letter to general practitioners
- [N/A] Letter to parents/guardians
- [N/A] Letter of other ethics committee approval or other approvals
- [✓] Copy of e-mail recruitment circular/poster/press advertisement
- [✓] Questionnaire/topic guide/interview questions
- [N/A] Evidence of permission from organisation (e.g. hospital) where research is to take place
- [✓] List of Acronyms

Please list any other supporting documents:

1. University of Surrey insurance information
2. References

Comments about form

If you have any suggestions for improving this form please e-mail them to ethics.sec@dstl.gov.uk
Annex A MoDREC Application (Beaumont)

References


Campbell, J. (2007) Hospitals fir for heroes?


DH (2005) Health Service Guidance covering Arrangements between the Ministry of Defence and the NHS for: A. The Use of Defence Medical Services (DMS) Personnel in NHS Trusts, B. The treatment of Service Personnel in NHS Hospitals, C. Continuing Medical Care of Service Personnel on Retirement or Discharge from the Armed Forces.


Wg Cdr Steven Beaumont,
Defence Medical Rehabilitation Centre,
Headley Court,
Surrey KT18 6JW.

Dear Wg Cdr Beaumont,

Re: Competence to Practise On Deployed Operations: The Experiences of British Military Nurses (0843/198)

Thank you for submitting this protocol for ethical review by the MoD Research Ethics Committee.

I am now happy to give ethical approval on behalf of the Committee for this research to proceed. This approval is conditional upon adherence to the protocol – please let me know if any amendment becomes necessary.

I hope the research goes well.

Yours sincerely,

Dr Robert Linton
Chairman MoD Research Ethics Committee
Submission To The University's Ethics Committee For The Approval Of Study
Protocol Cover Sheet

1. Title of project: **COMPETENCE TO PRACTISE ON DEPLOYED OPERATIONS:
THE EXPERIENCES OF BRITISH MILITARY NURSES**

2. | Names of Principal Investigators | Qualifications | Department/Institution |
<table>
<thead>
<tr>
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<tbody>
<tr>
<td>Professor K Bryan</td>
<td></td>
<td>Faculty of Health and Medical Sciences</td>
</tr>
<tr>
<td></td>
<td></td>
<td>University of Surrey</td>
</tr>
</tbody>
</table>

Names of Co-Investigators

<table>
<thead>
<tr>
<th>Names of Co-Investigators</th>
<th>Qualifications</th>
<th>Department/Institution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Steve Beaumont</td>
<td>MSc BA(Hons) RGN</td>
<td></td>
</tr>
<tr>
<td>Dr H Allan</td>
<td></td>
<td>Faculty of Health and Medical Sciences</td>
</tr>
<tr>
<td></td>
<td></td>
<td>University of Surrey</td>
</tr>
</tbody>
</table>
3. Signature of Supervisor (where appropriate) to indicate that (s)he has read and approved the protocol submission:

Date: September 2008

4. Details of Other Collaborators:

None

5. Details of Sponsors:

Defence Medical Services Postgraduate Medical Deanery

6. Details of payments to Investigators, Departments, Schools or Institutions. Investigators who receive payment as part of an annual consultancy fee should advise the Committee of the situation: None

7. Where will the project be carried out? (e.g. University, hospital, etc.):

Hospitals and military establishments.

8. Source of the participants to be studied: All serving military nurses (n= 1346) will be sent the questionnaire by post for Part 1 of the Study. The study population for Part 2 of the study will be decided following the analysis of data from Part 1. This will be included in the Ethics application for Part 2.
9. Details of payments to participants: None

10. Investigators are asked to note that research proposals involving the following must be submitted to an NHS Research Ethics Committee for ethical review. Please indicate which of the categories below, if any, applies to your research, and provide details of your NHS REC application. The Ethics Committee will not consider research proposals which meet any of these criteria until NHS REC approval has been obtained.

   a. patients and users of the NHS. This includes all potential research participants recruited by virtue of the patient or user's past or present treatment by, or use of, the NHS. It includes NHS patients treated under contract with private sector institutions.

   b. individuals identified as potential research participants because of their status as relatives or carers of patients and users of the NHS, as defined above.

   c. access to data, organs or other bodily material of past and present NHS patients.

   d. fetal material and IVF involving NHS patients.

   e. the recently dead in NHS premises.

   f. the use of, or potential access to, NHS premises or facilities.

   g. NHS staff – recruited as research participants by virtue of their professional role.
The questionnaire was reviewed and supporting documentation was reviewed by the RAF Scientific Advisory Committee in June 2008. Following their direction, the questionnaire was changed and minor amendments were made to the supporting documentation.

The research documentation was forwarded and approved by the MoD Ethics Committee on 22 Aug 08 following minor adjustments.

The research documentation was then sent to the Directors of Nursing of the Navy, Army and RAF. The questionnaire was amended again following feedback. An amendment request was forwarded to the MoD Ethics Committee and a letter approving the changes was received on 4 September 2008.

11. Has a risk assessment been carried out in respect of this research, either for potential participants or the researchers? If yes, please attach a summary document of the issues considered. If no, please explain why it has not been done.

Given that this part of the study is a questionnaire, potential hazards, risks or adverse effects associated with the study have been considered and thought to be negligible.

12. What are the potential adverse effects, risks or hazards for (a) research participants? (b) researchers?

The questionnaires may cause upset as they are asking an individual about their deployment. Such deployments may have been traumatic. If this is an issue, the individual will be encouraged to seek support. Conversely, the participant may find it therapeutic.
13. What are the potential benefits for research participants? No direct benefit from completing the questionnaire for Part one, although participants will have the opportunity to volunteer for Part two. Part two, which will be qualitative interviews, may provide benefits for future practitioners in the identification of competence required for practice on deployed operations.

14. Please provide details of arrangements for the collection, retention, use and disposal of research data: Data from questionnaires for Part 1 will be handled by Steve Beaumont. Data will be coded and analysed using SPSS. All information will be kept in a locked cabinet. Steve Beaumont will have access to raw data. University will have access to coded data. Consent and other records will be kept for 100 years in accordance with MoD Research Policy. Details regarding the collection, retention, use and disposal of research data for Part 2 will be included in a separate ethics approval application to the MoD and the University of Surrey.

15. Has a Criminal Records Bureau (CRB) check been carried out in relation to this research? (This will be required for research activity which will bring staff and/or students into contact with children or vulnerable adults). If yes, please attach copies of the relevant documentation. Not applicable.

16. For Drugs Trials not applicable.
   i. Please state Phase:

   ii. If a new drug, does it have a Clinical Trials Exemption Certificate or Product Licence Number?

   iii. If a new drug, give details of toxic/side effects so far reported:

   iv. In addition to the recorded toxic/side effects, state any potential risks to the subjects and the precautions taken to deal with the situation:

17. Checklist of Accompanying Documents (Please tick the appropriate boxes)
Please ensure that, where appropriate, the following documents are submitted along with your application:

1. A summary of the project, (approximately 500 words), including its principal aims and objectives; this should provide a clear description of who is doing what, to whom, to how many, where, when and why in non-technical, lay terms.

2. The detailed protocol for the project.

3. Evidence of agreement of other collaborators.

4. Copy of the Information Sheet for participants.

5. Copy of the Consent Form.

6. Copy of questionnaire/interview schedule.

7. Copies of standard letters related to the project.

8. Copy of risk assessment.

Appendix five

x Confirmation that CRB (Criminal Records Bureau) checks have been carried out – this will be required if there is contact with children and vulnerable adults for significant periods of time

xi Evidence of insurance cover/indemnity, particularly for drugs trials

(Please refer to the Insurance Guidelines)

xii Copy of the Clinical Trials Exemption Certificate or Product Licence Number

xiii Information concerning any other Ethical Committee to which an application for approval is being made

18. Names and signatures of all Investigators:

19. Date of Application:

September 2008

20. Address for Correspondence:

Wing Commander S P Beaumont
Defence Medical Services Rehabilitation Centre
Headley Court
Epsom
Surrey
KT18 6EG
Tel: 07809 566612
EMail: S.Beaumont@surrey.ac.uk
ABSTRACT

COMPETENCE TO PRACTISE ON DEPLOYED OPERATIONS: THE EXPERIENCES OF BRITISH MILITARY NURSES

The Defence Medical Services recruit and train nurses to support military operations and peacetime health needs of the military population.

Up until the mid 1990s the majority of military nurses were employed within military hospitals located in UK and overseas. It was felt that military hospitals did not provide the clinical training environment that would prepare military medical staff for their role. Therefore, Selly Oak Hospital was chosen to be the Royal Centre for Defence Medicine with Ministry of Defence Hospital Units (MDHUs) embedded within NHS Trusts throughout UK to provide areas for clinical practice.

Nurses work in a variety of locations within MDHUs, but there is no direction on how to ensure these nurses are competence to practice on deployed operations. Also, there is limited debate on how military nurses able to transfer the skills they use in peacetime in often hostile, alien and dangerous environments.

This study will assist in determining the proficiency standards of military nurses on deployment. The study will be in two parts. Part one will be a questionnaire to establish baseline data of deployments and how well nurses felt prepared to cope with these deployments. Survey participants will also have an opportunity to volunteer for part two of the study. Part two will consist of in-depth interviews to explore issues raised by the survey.

The study aims to provide a blueprint for preparing nurses to support military operations effectively.
COMPETENCE TO PRACTISE ON DEPLOYED OPERATIONS: THE EXPERIENCES OF BRITISH MILITARY NURSES

STUDY PROTOCOL

INTRODUCTION

The Defence Medical Services (DMS) provide medical services to military personnel in times of conflict and peace. Personnel in the DMS include doctors, nurses and allied health professionals. Apart from caring for Servicemen and their dependants and other entitled personnel in peacetime, DMS personnel are required to prepare to provide medical support in times of conflict as part of their operational role. This study will concentrate on military nursing personnel employed by the Navy, Army and Royal Air Force who have recently supported military operations in Iraq and Afghanistan.

In addition to two military hospitals located overseas in Cyprus and Gibraltar, military secondary care nurses are mainly employed in Ministry of Defence Hospital Units (MDHU) which are integrated in NHS Trusts. Nurses are employed in a variety of locations such as military managed units and wards and also in specialised areas in the hospital such as emergency departments, theatres and intensive care. In essence the objective is to expose nurses to nursing practise that will enable them to fulfil their operational role.

AIM

The aim of the study is to identify what factors enable nurses to care for patients in areas of conflict.
SCOPE

The study will concentrate on the experiences of nurses regarding their military nursing competence whilst on deployment in Iraq and Afghanistan. It will not address any issues regarding general military competencies.

OBJECTIVES

The objectives of the study are to address the following questions:

➢ Do nurses have the requisite skills to ensure competence to practise when they are on deployed operations?

➢ Does the mode of training (before or after PK2000) have any effect on whether these nurses are able to adapt to nursing in an operational environment?

➢ Does previous military nursing experience equip them to undertake their military nursing role more effectively?

➢ Do military nurses who have previously worked in military hospitals feel better equipped to undertake their operational roles?

➢ What impact does the current pre-deployment training have on their competence to work in an operational environment?

➢ Are military nurses able to adapt skills learned in their peacetime role to those required in an operational setting?
In essence does the current peacetime training and experience prepare military nurses to fulfil a unique and often dangerous operational role? Exploration of the literature highlighted a gap in this area. Indeed, there has been no research carried out in the UK regarding the issue of the competence of military nurses.

THE STUDY

The study is divided into 2 distinct phases as follows:

PART 1: QUESTIONNAIRE TO DETERMINE RESEARCH GROUP

The questions for the survey are enclosed with this protocol. The questionnaires are the same but have variations to take into account the different rank structures of the single Services. The questionnaire has been peer reviewed by military nurses who have been on deployment. The questionnaire will act as a survey and the questions posed will provide biographic and other data.

The data will be analysed using SPSS. The data will be interrogated to answer the study objectives.

PART 2: INTERVIEWS AND QUALITATIVE ANALYSIS

Part 2 of the study will involve qualitative interviews. A separate application for MoD and University of Surrey ethical approval will be submitted.

ETHICAL CONSIDERATIONS

Participants will be identified following discussions with the relevant single service Manning departments who will be able to provide the names and contact details of individuals. The questionnaire will be sent to named individuals. Names will be
anonymised and individuals will be allocated a number. An information leaflet (see attached) will be included with each questionnaire and the participant will be able to contact Wing Commander Beaumont if more information about the study is required.

It is unlikely that anyone will be distressed by the questionnaire. However, the participant may see some benefit in applying to take part in Part 2 of the study. It is assumed that consent is given by the participant on completion and return of the questionnaire.

PARTICIPANTS TO BE STUDIED

All serving military nurses will be sent the questionnaire (n = 1364). The researcher has no direct line management responsibility for the research participants.

JUSTIFICATION FOR THE SAMPLE SIZE

Sending questionnaires to all military nurses will enable suitable participants are identified for Part 2 of the study as not all military nurses may have been on deployment. Moreover, the researcher is not aware of any similar survey being sent out to military nurses. Participants will be identified through the personnel departments of the 3 single Services. Questionnaire and accompanying information letters will be sent by post to the individual. There will be one mail shot with a return date being 21 days.

CONSENT

An information leaflet will be enclosed with each questionnaire that will give the contact details of Wing Commander Beaumont to enable participants to ask any
questions before completing the questionnaire. Consent will be assumed for the survey if the participant returns the questionnaire. All military nurses are deemed competent to take part in Part 1 of the study. The possibility of coercion by superiors distributing the questionnaires will be avoided as the questionnaire will be sent directly to named individuals.

**POTENTIAL HAZARDS**

Give that this part of the study is a questionnaire potential hazards, risks or adverse effects associated with the study has been considered and thought to be negligible. The questionnaires may cause upset as they are asking an individual about their deployment. Such deployments may have been traumatic. If this is an issue, the individual will be encouraged to seek support. Conversely, the participant may find it therapeutic.

The opportunity to participate in in-depth interviews in Part 2 of the study will enable the participants to tell their own stories about their experiences whilst on deployment. It is hoped that any competence issues will be identified on completion of part 2 of the study.
LITERATURE REVIEW

This literature review is part of the supporting evidence for the proposal to undertake research regarding competence to practice by military nurses being deployed to Iraq, Afghanistan and other areas in support of military operations during times of conflict. The review will start by exploring the recent history of military nurses and then how adults learn and how learning theories are utilised in different professional educational programmes. The role of the military nurse will be discussed and reference made to the measurement of competence in nursing practice.

Prior to 1995

Prior to 1995 military nurses worked predominantly in military establishments such as medical centres and military hospitals. Military hospitals were resourced by either the Royal Navy, Army or Royal Air Force personnel or a mix from all three Services. Nurse entry into the military service was either by direct entry following training in the NHS or by completion of training in single Service nurse training schools. All military nurses, at some time in their career, would be expected to work in a military hospital. In the 1990s two major events changed the military medical services. Firstly, the Cold War which had seen the gradual military build up by the West in response to perceived threats by the Soviet Union was coming to an end. The subsequent need to reduce the “teeth” of the Armed Services saw a reduction in the supporting elements of the Services which included the military medical services (Campbell, 2007). Secondly, the Defence Cost Study 15 (MOD, 1995) led to a significant change to secondary health care provision. This included the closure of military hospitals in UK and in Germany. However, military hospitals still exist in Cyprus and Gibraltar. These hospitals remain as it is felt that the healthcare service
in those countries do not meet the medical service delivery requirements that would be expected in the UK NHS.

**Defence Cost Study 15**

The Defence Cost study had two main aims, along with the necessity to save £500 million over ten years, these were:

- To provide a medical services that was in line with "best practice" provided by the NHS.
- The size of the defence medical services should reflect the demands of operational deployments (MoD, 1996).

Unfortunately, the full document and research that led to DCS 15 is not in the public domain. Therefore, the research to support the rational to change the defence medical services is not available. However, from a broad perspective it was felt that the military hospitals did not provide the full range of medical activities that a large NHS hospital would provide. The manpower recommendations led to a shrinkage of the military medical services with redundancies imposed to reduce manpower. It was decided that the responsibility for primary care should remain with the Single Services. However, the management of secondary care would be the responsibility of a tri-service agency.

Another recommendation was to close military hospitals in the UK and move secondary care into what was known as Ministry of Defence Hospital Units (MDHU), which would be embedded within an NHS hospital. These units vary in size and structure, but usually include a military led ward with the rest of the military medical personnel working within other departments within the hospital. These departments include areas such as intensive care, theatres, emergency departments and acute
medical admissions departments. MDHUs are currently located in Northallerton, Peterborough, Frimley Park, Portsmouth and Derriford. All of the MDHUs have a military headquarters embedded within the host Trust.

The current agreement between the Department of Health and the Ministry of Defence details the responsibilities of host trusts for patient care and the use of military staff (DH, 2005). The document states that:

"...[DMS personnel]..contribute to the NHS clinical capacity and enable DMS personnel to maintain their clinical expertise whilst maintaining their military skills and ability to deploy quickly to areas of conflict in support of frontline forces" (DH, 2005)

The agreement endorses the need to employ DMS personnel in areas that will "ensure clinical competency for their military operational role and maintain and enhance their clinical skills" (DH, 2005, p.3). However, there is no current definition on what military nursing clinical competency is and its requirement for the support of military operations. Therefore, the skills required to care for clients during times of conflict or indeed being able to foster the abilities to be able to transfer nursing practice skills from a peace-time environment to that of deployed operations is not clearly recognised. However, senior military nurses employed at the MDHUs have acknowledged the need to develop the newly qualified military staff-nurse, who has undergone their training in a NHS environment, to ensure that post-registration experience is not restricted to one area of nursing and that such experience is relevant to the operational role of the military nurse. Locally agreed rotation programmes have been put into place to address this issue. Nurses are usually placed in areas such as acute medicine, surgery and accident and emergency.

The contracts that are agreed between the NHS and the MoD, includes an agreed
Appendix five

amount of protected time allocated to military medical personnel to allow for military training.

Going on deployment

Nurses have always worked in support of military operations. In recent conflicts, military nurses have written about their experiences. The literature search identified some articles from American War veterans, but articles relating to UK nurses working in support of war are sparse. Stanton et al., (1996) carried out a phenomenological study of nurses who had served in Vietnam, World War 2 and Operation Desert Storm. Twenty-eight individuals participated in the study, five of whom were men. The studies identified themes that included how the individual reacted personally to the situation and the issues around living with the military and nursing in the military setting. Participants identified fatigue and mental stress, fear and sadness as personal reactions. The primitive living arrangements and confusing travel arrangements were accepted as part of living with the military. Issues around being combatant as opposed to non-combatant as a nurse, dealing with complex cases and camaraderie were cited as particular features of military nursing. Participants also cited visual experiences such as sight and smell and how they adjusted to the situation by accepting a reduction in control, innovation and humour.

Foley et al., (2000) in their phenomenological study of 24 nurses who were deployed in support of the first military operation in Bosnia, detailed the lack of knowledge regarding the uniqueness of military nursing and its inherent exposure to danger as particular issues for the participants. The participants in this study referred to the adverse weather conditions and primitive sanitation and water supplies that the nurses had to face. The study also described how the nurses in such situations
adopt a more proactive advocacy role for the patient. These included being there for the patient and being the patient's voice with regard to the treatment by physicians who often saw the patient as an object rather than an individual. In addition, the study refers to other issues such as having to use Individual Protective Equipment (IPE), which includes respirators and protective over suits, that had to be worn during their deployment.

Wallis, (2001), in her narrative of the experience of being a nurse in Sierra Leone refers to issues that will not normally effect a nurse practising in peacetime. She mentions that the fear of been captured and the unpredictability of the rebels. These fears that were unique to her situation and replaced the tensions that she would have normally felt in her day to day practice in an intensive care unit in peacetime. A web site is available for women who served in war allowing nurses who have served in war the opportunity to paste their thoughts and experiences (Women who served in war). The comments endorse those that have been referred to earlier such as the use of IPE, camaraderie, and friendship and working as a team. One comment suggests that the experiences were both exciting and emotional. Other comments refer to more personal issues such as leaving home and family.

Another study involving 36 nurses who were involved in Operation Desert Storm (Dahl and O'Neal, 1993), highlighted issues such as lack of faith in the command and control organisation, bad communication, complaining and uncertainty to name but a few. Nurses in this study referred to coping strategies such as exercise, laughter and the development of coping skills.
Coping with the severely wounded is a theme in the literature, (Wallis, 2001, Stanton et al., 1996, Biederman et al., 2001). Biederman et al (2001), in their study of Australian nursing sisters who served in Vietnam, highlighted the lack of training prior to their deployment. Whilst one of the participants referred to the usefulness of her accident and emergency experience, others referred to their lack of training to undertake their role such as triage without the support of a specialist team, which would be the expected norm in a peacetime hospital. One nurse described having to intubate patients having not undertaken this procedure before. However, she felt that she had to in these situations in the interest of the patient and given the fact that there was no one else to do it. Blurring of roles may be more evident in times of conflict and war and the use of military rank may also cause issues with professional collegiality. Lamb, (2006) refers to this in her article on the RAF Critical Care Air Support Teams. Rank does not always reflect the clinical experience of the individual. For example a nurse may have been in the Services for a period of time and been promoted. The nurse may then embark upon further training such as emergency or intensive care. Therefore, the practitioner may hold a rank in recognition of military service but may have little experience in his or her new discipline of nursing. Also, medical officers are on a different terms of services than that nurses and will be eligible for promotion earlier. The military rank denotes leadership and management seniority of the individual and may not be a true reflection of an individual's clinical experience. Therefore, this may be an issue if the subordinate is the more experienced individual in a team. The issue of teamwork then takes priority to ensure that there is an effective clinical outcome for the patient. In essence, recognition will be given to experience. This is often the case in aeromedical nursing where the nurse is experienced in caring for patients in flight. Yet the medical officer, albeit senior, will not act as the team leader on flight.
Investigating Nurse Competence

A review of the history of nursing competency was carried out by Bradshaw, (2000). Her review highlighted the changes that have occurred in the perception of the definition of competence in nursing practice. Until the 1970s writers of nursing textbooks highlighted the competencies a practitioner had to possess in order to nurse effectively. These concentrated on aspects of nursing practice such as "...to develop the moral character of the nurse...equip the nurse with the requisite knowledge and skills needed for the purpose of nursing care..." It also emphasised the method of learning as primarily by example of the ward sister and relationships both with colleagues and patients (Bradshaw, 2000). Therefore, senior nurses such as ward sisters have a pivotal role in nurse education. There are similarities with military nursing practice where rank and seniority is a reflection on the individuals' responsibility to coach and develop their subordinates. Indeed, such qualities are commented on in all military nurses' annual appraisals.

Different modes of training may influence how effective the nurse is following initial registration. The competencies of newly qualified nurses in relation to whether they had completed a graduate or diploma programme has been explored by Bartlett et al., (2000). Data was collected from 52 graduate nurses and 28 diploma nurses from a different university. The data was collected by means of a questionnaire at graduation and then at 6 and 12 months following graduation. Questionnaires were also completed by their mentors or supervisors. The results showed that there was a difference in the competencies of the degree and diplomat nurses. Despite the diplomats scoring higher in leadership initially, over the period of six months to one year the graduates made up ground. They were also found to be more active in continual professional development than that of diplomats. The study suggested that the diplomats might need support in this aspect during their career. The study
Appendix five

also makes reference to the lack of nationally agreed competencies. This study found that there were no significant differences between the scoring of the nurse by the supervisor or mentor. Likewise in the Defence Nursing Service no differentiation is made between graduate and diplomat nurses. However, military nurses, whether commissioned or non-commissioned are expected to complete Service leadership and management courses to make them eligible for promotion.

But there is confusion about the definition of the word competence (Lofmark et al., 2006, Khomeiran et al., 2006, Watson et al., 2002). In a systematic review carried out by Watson et al (2002) the interpretation between competence and performance is referred to. More importantly the review suggests that such a dilemma with regards to the concept of competence will ultimately have an effect on the assessment of competence.

Various methods of assessing competence have advantages and disadvantages. Studies undertaken in the UK tend to concentrate on a qualitative approach to measurement whereas studies in the US use a more quantitative approach (Bartlett et al, 2000). Work satisfaction has also been related to how individuals function in their work and the possible relation to competence. Such a study was carried out by Sand, (2003) over a period of ten years. The study involved 51 female nursing students in Sweden, who were followed up at 2 years and 10 years. The results were grouped into themes, which included “empathetic, discomfort prone, service-minded and dominant” (Sand, 2003, p.2). These themes were then related to nursing competence and work satisfaction. The study suggested that the measurement of competence alone was not possible in this study and it was also felt that the patients’ perception of a nurse’s competence should also be taken into account. The study highlighted a distinct lowering in job satisfaction over a period of
Appendix five

time. The author suggested that there was a correlation between job satisfaction
and the individual’s performance.

A quantitative study was carried out by Meretoja and Leino-Kilpi, (2003) to compare
the competence ratings of nurses and their nursing managers. Data was analysed
utilising a questionnaire, which had questions pertaining to categories such as
helping interventions, ensuring quality and work role. Role, teaching and coaching,
diagnostic functions, managing situations, therapeutic interventions, ensuring quality
and work role were also discussed. The findings showed that the managers rated
the competence of their nurses more than that of the nurses themselves. The major
differences were found in the teaching and coaching roles. Moreover, experience in
a particular work setting showed a positive correlation to the individual’s own
perception of competence. The lowest competence measure in the study was found
to be that of ensuring quality. More feedback regarding an individual’s performance
was also seen to result in the improved performance of the individual.

A phenomenological approach to the assessment of competence in clinical practice
was carried out by Girot, (1992). The study explored the competency of student
nurses as seen by 10 experienced practitioners. Four common themes were
identified; trust, caring, communication skills and knowledge/adaptability. One of the
findings of this study indicated that the student appeared to focus more on
specialised skills when they were in their third year and post-registration as opposed
to their emphasis on basic skills and holistic care in their first two years of training.
This may be a negative aspect in the role of the military nurse where the military
nurse on deployment will have a distinct advantage of having a generalist nursing
background. The military nurse will have to deal with a wide range of conditions that
come into a field hospital. This issue may be of concern for those registered nurses joining the Armed Service as a direct entrant as they may have already embarked on a specialist nursing role. Again their generalist nursing skills may be limited.

In Australia beginning level competence details the minimum level of competence for registration. Continuing competence and identification of currency of practice are an essential aspect to enable the practitioner to re-register in many states (Pearson et al., 2002). Pearson et al (2002), identified the need for further research regarding competence in relation to the regulation of nursing practice.

Conclusion

The definition of competence is not clear. There has been little research carried regarding how military nurses are able to transfer skills from a peacetime to an operational role. The literature refers to lack of training for such roles and the need for the practitioner to be flexible and adaptable. This may not be straightforward due to the focus on gaining specialist nursing skills. The literature does not provide information on how the nurse may develop and learn in the operational setting. Military nurse are now deployed on a regular basis given the current operational tempo.

The questionnaire will provide a platform for a survey for part 1 of this research study. It will provide biographic data such as rank and Service. It will also provide an opportunity to explore the relationship between the nurse's peacetime role and the patients they care for in the operational theatre. The frequency of deployments of particular nursing groups will be identified.
References


Campbell, J. (2007) Hospitals fir for heroes?


DH (2005) Health Service Guidance covering Arrangements between the Ministry of Defence and the NHS for: A. The Use of Defence Medical Services (DMS) Personnel in NHS Trusts, B. The treatment of Service Personnel in NHS Hospitals, C. Continuing Medical Care of Service Personnel on Retirement or Discharge from the Armed Forces.


Wing Commander Steve Beaumont  
Defence Medical Rehabilitation Centre  
Headley Court  
Epsom  
Surrey  
KT18 6JW

21 October 2008

Dear Steve

COMPETENCE TO PRACTISE ON DEPLOYED OPERATIONS: THE EXPERIENCES OF BRITISH MILITARY NURSES  
EC/2008/85/MoD Fast-Track

On behalf of the Ethics Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the submitted protocol and supporting documentation.

Date of confirmation of ethical opinion: 21 October 2008.

The list of documents reviewed and approved by the Committee under its Fast Track procedure is as follows:-

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<td>Summary of the project</td>
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<td>21 Oct 08</td>
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<td>Questionnaire/Interview Schedule</td>
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This opinion is given on the understanding that you will comply with the University's Ethical Guidelines for Teaching and Research.

The Committee should be notified of any amendments to the protocol, any adverse reactions suffered by research participants, and if the study is terminated earlier than expected with reasons.

You are asked to note that a further submission to the Ethics Committee will be required in the event that the study is not completed within five years of the above date.

Please inform me when the research has been completed.

Yours sincerely

Aimee Cox (Miss)  
Secretary, University Ethics Committee  
Registry

cc: Professor T Desombre, Chairman, Ethics Committee
IRAQ CASUALTY FIGURES

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1. These data are provisional and subject to change.
2. The personnel listed as VSI and SI may also appear in the UK field hospital admissions and Aeromed Evacuations data.
3. The admissions data contain UK personnel admitted to any Field Hospital, whether operated by UK or Coalition Medical Facilities.
4. Civilians are not included in the figures previous to 01/01/2006.
5. The VSI and SI injury data includes records classified as 'Other Causes'. This classification is used when there is insufficient information to attribute a casualty to injury or natural cause.

Source: NOTICAS

Source: UK and Coalition Medical Facilities

Source: AECC

324
# Afghanistan Casualty Figures

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- **Source:** NOTICAS
- **Source:** UK and Coalition Medical Facilities
- **Source:** AECC

2. The last 3 months of data are provisional and subject to change.

3. The VSI and SI injury data includes records classified as 'Other Causes'. This classification is used when there is insufficient information to attribute a casualty to injury or natural cause.

4. Civilians are not included in the figures previous to 01/01/2006.

5. The personnel listed as VSI or SI may also appear in the UK field hospital admissions and Aeromed Evacuations data.

6. The admissions data contain UK personnel admitted to any Field Hospital, whether operated by UK or Coalition Medical Facilities.

7. The Disease or Non Battle Injury figures are Non Battle Injuries only until 27th October 2006, disease is included from 28th October to be consistent with Op TELIC reporting.

PARTICIPANT INFORMATION SHEET

COMPETENCE TO PRACTISE ON DEPLOYED OPERATIONS: THE EXPERIENCES OF BRITISH MILITARY NURSES

We would like to invite you to participate in this research project being undertaken by Wing Commander Steve Beaumont under the supervision of Professor Karen Bryan. You should only participate if you want to; choosing not to take part will not disadvantage you in any way. Before you decide whether you want to take part, it is important for you to understand why the research is being done and what your participation will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information.

The study will be carried out in two phases. Phase one will be the completion of a questionnaire which will provide baseline data and will give the opportunity to participate in phase two. Phase two will involve an interview to gain further insight into experiences regarding nursing competence to practise on operational deployments. Findings will inform a review of preparation and training prior to deployment.

You may at any time withdraw from the study at any time experiment without giving a reason. If you ever require any further explanation, please do not hesitate to ask.

Any information obtained during this study will remain confidential as to your identity: if it can be specifically identified with you, your permission will be sought in writing before it
will be published. Other material, which cannot be identified with you, will be published or presented at meetings with the aim of benefiting others. You may ask the Project Officer for copies of all papers, reports, transcripts, summaries and other published or presented material. All information will be subject to the current conditions of the Data Protection Act 1998.

In the event of you suffering any adverse effects as a consequence of your participation in this study, you will be eligible to apply for compensation under the MoD's 'No Fault Compensation Scheme' (see separate sheets for details).

Records, including paper records and computer files, will be held for a minimum of 100 years in conditions appropriate for the storage of personal information. You have right of access to your records at any time.

A full scientific protocol for this research has been approved by the Ministry of Defence Research Ethics Committee. This study complies and at all times will comply with the Declaration of Helsinki as adopted at the 52nd WMA General Assembly, Edinburgh, October 2000 and with the Additional Protocol to the Convention on Human Rights and Biomedicine, concerning Biomedical Research, (Strasbourg 25.1.2005). Ask the Project Officer if you would like further details of the approval or to see a copy of the full protocol.

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Appendix nine

Name and contact details of Principal Investigator:

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E Mail: S.Beaumont@surrey.ac.uk

Name and contact details of Research Supervisor:

Professor Karen Bryan
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CONSENT FORM FOR PARTICIPANTS IN RESEARCH STUDIES

Title of Study: Competence to Practise on Deployed Operations: The Experiences of British Military Nurses

Ministry of Defence Research Ethics Committee Reference: 0843/198

- 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 it at any time, and that 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 strictly confidential and handled in accordance with the provisions of the Data Protection Act 1998.

- I agree to volunteer as a participant for the study described in the information sheet and give full consent.

- This consent is specific to the particular study described in the Participant Information Sheet attached 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 Ministry of Defence 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.
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. I have read both the notes written above and the Participant Information Sheet about the project, and understand what the research study involves.

Signed ____________________________ Date ____________________________

Witness ____________________________ Name ____________________________

Signature ____________________________

Investigator's Statement:

I 

confirm that I have carefully explained the nature, demands and any foreseeable risks (where applicable) of the proposed research to the Participant.

Signed ____________________________ Date ____________________________

AUTHORIZING SIGNATURES

The information supplied above is to the best of my knowledge and belief accurate. I clearly understand my obligations and the rights of research participants, particularly concerning recruitment of participants and obtaining valid consent.

Signature of Principal Investigator ____________________________

Date ____________________________
Name and contact details of Principal Investigator:

Wing Commander S P Beaumont  
SO1 Medical Personnel Policy (RAF)  
HQ Air  
COS Health/DGMS (RAF)  
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RAF High Wycombe  
Bucks  
HP14 4UE  
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Example of a memo following an interview

This participant appeared traumatised by the whole experience of being deployed. The participant did not feel at all prepared for her role which was very specialist. The participant’s peace-time role bore no resemblance to what she had to do on deployed operations. The inaccuracy of the information about the deployment added to the lack of preparedness. The participant felt inadequate when dealing with patients but “did my best”. It appeared that she felt guilt for not being prepared; but this was out of her control. The participant referred to the lack of emotional support when she returned to her unit. This participant was clearly moved by the lack of preparedness. The participant had written a post-operational report, but she felt that the points made had not been taken on board.
Example of a schematic memo

First deployment for all of the team

No recognition of clinical experience

Them and us

The issue of rank

This schematic diagram identifies the issue that rank may have on personnel on deployment. In this example, it was the first deployment for all members of the team. However, rank took priority with no recognition being given for clinical experience.