IDENTIFYING COMPETENCY SKILLS OF PROFIS PERSONNEL

by

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A THESIS

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Dedication

This thesis is dedicated to my best friend and husband Talon, who has always been the driving force in my life. His love, words of encouragement, and continual support are a constant reminder that we all must “Endeavor to Persevere.” Also, I send my love to my daughter Christina, through whose death 7 Nov 2001, I learned never to take anything for granted.
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To all the PROFIS individuals who participated in this research, because you cared; PROFIS personnel will be better prepared to meet deployment missions and to “conserve the fighting strength.”

To the Army and Army Nurse Corps for a very rewarding military career.
Abstract

The purpose of this quantitative descriptive study was to identify the perceived readiness of United States Army Professional Filler System (PROFIS) personnel in regards to nursing competency and readiness for deployment during combat missions or Military Operations Other Than War (MOOTW). Patricia Benner’s (2001) Model of Novice to Expert and Raymond Flannery’s (1994) Theory of Stress Resistance were utilized as the conceptual framework to organize the study.

Research participants (n=131) from two military treatment facilities assigned to Great Plains Regional Command responded to the electronic Readiness Estimate and Deployability Index (READI). The READI is a 105-item survey which measures self-reported competencies related to six dimensions of nursing readiness: clinical nursing competency, operational nursing competency, survival skills, personal and psychological readiness, leadership and administrative support, and group integration and identification.

Descriptive statistics and the one-way Analysis of Variance were employed to statistically analyze the data. Even though the research surveyed three levels of nursing skills, (RN, LVN, CNA) the results were noted to be quite parallel across the groups. Significant differences were noted throughout the six dimensions of the READI and illustrated through the use of graphic panoramic displays. Significant differences were also noted between the two military treatment facilities in the dimensions of operational nursing competencies and
personal and psychological readiness. The overall means were noted to be lower than previous studies utilizing the READI. This study supports the previous works which identified the need for a measurement tool for deployment readiness. Findings also support the need for a structured core competency tool to provide succinct focused training to ensure deployment readiness.

Future research should include a meta-analysis of the previous studies completed, employing the Readiness Estimated and Deployability Index to build a comparative index of readiness assessments. Also, a pre and post deployment research study should be employed utilizing the READI. A core competency tool should be developed and tested in the field environment. Finally, the READI should be adapted and tested for use in the private sector.
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Chapter 1: The Problem

Introduction

On December 7, 1941, the Japanese attacked Pearl Harbor. The Army Nurse Corps Officers involved in the ensuing pandemonium functioned under great stress. Hundreds of critically injured service members suffering from burns, shock and shrapnel wounds arrived at Tripler Army Hospital (TAH). Quickly, the staff became overwhelmed (Hughes, 2000). Waves of wounded individuals continued arriving into the night. The entrance steps of the hospital became covered in blood, which spread into the hallways of the medical facility. Wounded soldiers lying on the floor lined the hallways awaiting surgery. Nurses took initiative, made quick decisions and provided innovative solutions to a complex range of problems during the catastrophe (Bellafaire, 2000).

Nursing personnel were not prepared for the deluge of injured or for the carnage they witnessed that day. Never to be forgotten from a nurse’s memory was the mangled mass of bone, and bloody and charred tissue. One nurse recalled the unforgettable stench of burnt body tissue (Samecky, 2001). By the end of the day, 344 battle casualties were admitted to TAH and 138 deceased personnel were processed by the morgue staff (Tripler Army Medical Center, 2001).

On September 11, 2001, this nation endured another act of aggression. Terrorists attacked the World Trade Center and the Pentagon, and again military healthcare providers responded. CPT Barlow, an Army Nurse Corps Officer
stationed at Walter Reed Army Medical Center, recounted the events he witnessed. He described the mass confusion around the Pentagon, the smell of burning flesh, the look of terror on people’s faces and the overwhelming grief—things he will never forget. CPT Barlow credits the training received while assigned to a combat support hospital and knowledge acquired in nursing school for the quick decisions he made that day (Personnel communication, September 12, 2001).

As early as the Revolutionary War, nurses have responded patriotically to care for the troops during wartime situations. The need for educated healthcare providers to function in humanitarian missions, wartime and in military operation other than war (MOOTW) is well documented in the literature. Initially, nurses were first sought to care for the wounded during war in 1775 (Ulmer, 2001). During the Crimean War, Florence Nightingale established basic nursing skills needed to care for the sick and wounded. The skills included noise discipline, cleanliness, proper nutrition, and nursing management. Today, Nightingale’s basic nursing skills are an essential component in nursing curricula and are valued by military nurses (Palmer, 1991). In 1862, Dorothea Dix was summoned by the War Department to train 100 female nurses in military rules and regulations, dressing wounds, giving medication, and supervising wards (Kalish & Kalish, 1976).

Zadinsky (1996) relates the motto of the Army Medical Department (AMEDD) nursing personnel is “to conserve the fighting strength.” Nursing
personnel must maintain competency in skills and functions critical to their individual roles in a deployed or field status. These nursing roles include critical care, pre/post operative care, anesthesia care, x-ray, laboratory, pharmacy, nursing /personnel management, emergency trauma management, and other diverse medical nursing roles to include the field of pediatrics and OB/GYN.

Nursing personnel in the Army (officers and enlisted members) may be assigned to two major types of commands: Medical Command (MEDCOM) or U. S. Army Forces Command (FORSCOM). MEDCOM individuals generally work in the medical treatment facility (MTF), also known as a “fixed facility.” The MTF equates to a hospital in the civilian sector. FORSCOM personnel are assigned to work in combat support units. These units may be a forward surgical team (FST) and or a combat support hospital (CSH) (Professional Development and Readiness Guide, 1997).

To augment a CSH during deployment, the Army Medical Department (AMEDD) designates qualified active duty personnel, both officer and enlisted, serving in a fixed facility, to certain positions in the CSH. This designation system is known as the Professional Officer Filler System (PROFIS) (AR 601-142, 1995). As PROFIS personnel move from duty in a MTF to a deployed hospital, the need for additional training has been documented in research.

In the past, nursing personnel have relied on clinical experiences in the MTF to maintain their competency in a deployment status. However, the differences between nursing skills in the fixed facility as compared to the
deployment hospital have broadened. Zadinsky (1996) stipulates nursing personnel now utilize skills during deployment not routinely practiced in a fixed facility. Several noted differences include specialized care in a fixed facility versus general nursing care in the combat setting, high technology versus low technology in a field environment, automated equipment verses manual equipment, and moderate to high diversity in care scenarios in the combat setting.

Norman (1990) found that nurses deployed during wartime were unprepared regarding complex procedures and skills required for peri-operative and pre-anesthesia nursing. In addition, nurses reported they were ill-equipped to cope with the stress and physical requirements of long hours caring for traumatic war injuries resulting from large-scale military attacks.

In concert, Stanton & Bandiero (1998) specified nurses need to be better prepared clinically, physically and mentally to serve in a combat zone. The authors indicated clinical training prior to deployment had been inadequate. Due to the type of casualties encountered in the combat zone, Stanton & Bandiero (1998) suggested military nurses have special training to enhance their clinical competency.

Nursing personnel in a fixed facility are provided a six-week preceptorship regarding hospital standards and the use of equipment. In addition, these nursing personnel are evaluated on competency skills before functioning independently. In contrast, PROFIS personnel are not provided any type of
preceptorship with a combat support hospital. They are required to complete five
days of field training annually, qualify with a weapon every three years, and
complete common task training annually in preparation to join their assigned
combat support unit during deployment (AR 601-142, 1995). PROFIS personnel
must be competent to perform triage, act independently during a MASCAL (Mass
Causality), operate field equipment, and function in a harsh, possibly dangerous
environment with very little prior hands-on training and experience in the field
environment. Thus, nursing personnel must be prepared to accomplish the
mission and provide quality patient care regardless of conditions, improvising
when necessary (Reineck, 1999).

For deployment, an individual’s readiness must be continually accessed
to ensure he or she is competent to provide quality patient care in the field
environment. Reineck (1999) defines individual readiness as “a dynamic concept
with dimensions at the individual, group, and systems level, which together,
influence one’s ability to prepare to accomplish the mission” (p. 253). Six
interrelated components are identified in which impact individual readiness; (1)
clinical nursing competency, (2) operational competency, (3) survival skills, (4)
personal/psychosocial/physical readiness, (5) leadership and administrative
support, and (6) group integration and identification (Reineck, 1999).

It is imperative specific core competency skills be defined for the combat
support area to better prepare the PROFIS personnel to serve in combat or
MOOTW. Specific core competency skills impact greatly on mission and
individual readiness. The development of a specific core competency tool for a combat support hospital can be employed to provide a systematic structure in which to assess deployment readiness and provide focused training for PROFIS personnel (LTC Schmidt, personnel communication, 2001).

Statement of the Problem

Presently, core competency skills for PROFIS personnel have not been identified. In order to ensure deployment readiness, competency skills need to be delineated and a core competency tool developed enabling the PROFIS personnel to competently provide quality patient care while performing their wartime mission.

Purpose of the Study

The purpose of this study is to identify the perceived readiness of the PROFIS personnel in regards to competency and readiness for deployment. Based upon the findings of the research, recommendations for development of a core competency tool designed specifically to meet the needs of a combat support unit will be discussed.

Research Questions

Research questions for this study include:

1. Are there differences in perceived competency skills required for deployment in the combat support arena among PROFIS personnel assigned to the fixed facility?

2. Are there differences in perceived competency levels among PROFIS
personnel assigned to various fixed facilities?

Assumptions

The following are the assumptions of the study:

1. There are differences in perceived competency skills needed for deployment in a combat support hospital.
2. There are differences in perceived competency skills between different military treatment facilities.

Theoretical Definitions

Novice – A beginner having no experience with situations in which they are expected to perform (Benner, 2001).

Advanced beginner – One who has coped with real experiences and demonstrate acceptable performance (Benner, 2001).

Competent – The development of competence is demonstrated by the envisioning of actions in the terms of long-range goals or plans of which the nurse is aware (Benner, 2001).

Proficient – The nurse recognizes circumstances as a whole, rather than in terms of aspects, their performance is guided by maxims (Benner, 2001).

Expert – One who no longer relies on an analytic principle (rule, guideline, maxim) to connect her or his understanding of the situation to an appropriate action (Benner, 2001).

Domain of Reasonable Mastery – The capacity or skills to shape and influence events in daily life so that outcomes are beneficial (Flannery, 1994).
Domain of Caring Attachments of Others – Links or bonds with other members of the human family (Flannery, 1994).

Domain of Meaning – Utilizing concern for the welfare of others (Flannery, 1994).

**Operational Definitions**

Professional Officer Filler System (PROFIS) – The system designated to assign/attach Active Duty AMEDD personnel to Active Army Mobilization Table of Organizational Equipment (MTOE) required positions that are not authorized or not normally filled (AR 601-142, 1995, p.8).

PROFIS Personnel – Active duty AMEDD personnel in table of distributions and allowance (TDA) units which are designated for reassignment/attachment to vacancies in MTOE Active Army units upon initiation of contingency deployment or mobilization (AR 601-142, 1995).

Military Operations Other Than War (MOOTW) - Military support provided during humanitarian, peacekeeping or peace enforcement operations, such as those rendered in Bosnia and Kosovo, and disaster assistance (Staggers, TriService Grant, 1999).

Combat Support Hospital (CSH) - A 296 bed deployable hospital utilized for resuscitative surgery, stabilization for transport and return to duty (RTD) according to evacuation policy of active duty personnel (Zadinsky, 1996).

Forward Surgical Team (FST) - A team comprised of 20 medical personnel who performs initial resuscitative surgery to save life, limb, or eyesight and stabilize prior to transporting (Zadinsky, 1996).
Deployment - Act of extending battalions and smaller units in width or depth, or both, to increase readiness for contemplated action (PERISCOPE, 2002).

Competency – The effective application of knowledge and skill in the work setting (Fort Riley MEDDAC Memorandum, 2000).

Core Competency – Competencies that focus on the knowledge, skills and abilities required in the first six months to one year of employment; basic nursing skills expected to be used in the performance of their duties outlined in their position description contract Statement of Work (Fort Riley MEDDAC Memorandum 2000; Department of Nursing Administrative Procedure #4, 2001).

Mass Causalities (MASCAL) – A large number of casualties which has been produced simultaneous or within a relatively short period of time. The number of patients requiring medical care greatly exceeds the medical capability to provide individualized treatment and evacuation (Zadinsky, 1996).

Triage – The evacuation and categorization of casualties for treatment and evacuation to facilitate the intelligent use of available resources; ensuring the greatest good for the greatest number of casualties. Life takes precedent over limb, and functional repair over cosmetic concern (Zadinsky, 1996).

Psychosocial Well-being – A sense of contentment, peace of mind, basic happiness, comfort, and satisfaction with one’s self (Flannery, 1994).
**Conceptual Framework**

This study combines two conceptual frameworks to guide the conceptual support needed for the study. Patricia Benner’s (2001) Model of Novice to Expert will be used with Raymond Flannery’s (1994) Theory of Stress Resistance to organize the study.

Benner contends that a nurse’s role to provide quality patient care is situational. He/she progresses through five different levels of skill acquisition and development. The levels begin with novice and culminate with expert. As described by Benner (2001), there is a knowledge difference in “knowing that” as opposed to “knowing how.” “Knowing that” is the way one establishes understanding by applying relationships between events. “Knowing how” is the actual skill acquisition developed ahead of scientific explanations.

The model posits that as the nurse progresses through the levels of proficiency, four different levels of skill performance are demonstrated:

1. movement from reliance on abstract principals to the use of concrete experiences;
2. a change from rule based thinking to intuition;
3. a shift from viewing situations as a whole to that of which only certain parts are relevant to the situation; and
4. the passage of detached observer outside the situation to that of an active participant fully engaged in the situation (Tomey & Alligood, 1998).
As a novice, beginning nurses have no experience in situations of which they must perform. They have been taught skill development which is objective in nature: temperature, blood pressure, intake and output and other measurable attributes of a patients’ condition. Their skills are governed by text-book knowledge (Benner 2001).

The advanced beginners have dealt with real situations. They are able to apply recurring meaning to situations. They now formulate principals, which dictate certain actions in terms of aspects or procedural lists of things to do in certain situations. These procedural lists become important guidelines, which they follow. The advanced beginner still requires support in the clinical area in goal setting and patient priorities (Benner, 2001).

The competent nurses are which is typified by functioning in the same position for two to three years. They begin to view their actions in long-range goals of which they are consciously aware. Their plans determine which issues are most important and must be addressed from those which may be ignored. Although they lack the speed and flexibility of the proficient nurse, efficiency and organization is achieved through careful planning (Benner, 2001).

Once the individual becomes proficient, situations are perceived as a whole rather than terms of aspects. Situations are perceived in meanings of long-term goals. Through experience, the proficient nurse knows what to typically expect in response to certain situations and recognizes when the expected responses do not materialize. This knowledge base adds to the decision-making skills utilized
at this level. The nurse is now sensitive to which of the present attributes or aspects are important. Maxims (cryptic instructions which make sense only to the individual who has a developed a deep understanding of the situation) are used as a guide at this stage of competency (Benner, 2001). The proficient nurse no longer relies on preset goals but is able to determine changing situations as relevant and react appropriately to the situation. They are more interactive with the patient and family members. (Tomey & Alligood, 1998).

The final stage of the model addresses the expert nurse. The individual no longer relies on analytical principles (rules, guidelines, maxims) to link understanding of the situation to appropriate actions. Expert nurses possess an intuitive nature which reacts to a situation, focusing in on the most important aspects of the problem. When questioned why certain decisions were made, the most likely response would be “because it felt right” or “it looked good” (Benner, 2001, p. 32). Benner describes a qualitative change in the expert nurse. The expert performer “knows the patient,” i.e., knows the typical pattern of response and knows the patient as a person. Certain key aspects are noted in the expert nurse’s performance:

1. clinical grasp and resource-based practice,

2. embodied know-how,

3. seeing the big picture, and

Expert clinicians also provide consultation for other health care providers. They frequently make clinical judgment and manage complex situations in very remarkable ways. They are able to envision “what is possible” in a given situation. This one characteristic distinguishes them from the proficient nurse (Benner, 2001).


Nursing is practiced in real life situations with real world constraints, possibilities and resources. Certain environments may influence the individual’s ability to respond effectively. As nurses accrue clinical knowledge over time through experience and the sharing of knowledge with peers, there is a need for documentation of the clinical knowledge. Performance measurements can only be as useful and precise as the competencies selected to be measured (Benner, 2001). Benner’s model provides an appropriate framework to guide the development and monitoring of perceived competencies skills needed as PROFIS personnel prepare for deployment with a field unit in wartime or MOOTW.

Raymond Flannery’s (1994) Theory of Stress resistance offers a framework which may be used to reduce stress prior to deployment. Stress,
according to Flannery, is “the state of discomfort that arises when our problems exceed our resources to cope with them” (p. 55). Flannery notes the domains of mastery, attachment and meaning are the “general sets of abilities with which we confront the stressful events of our daily life” (p. 9). Utilizing adaptive strategies to respond to life stressors lead to a healthier life and a “stress-resistant person” (p. 9).

In establishing reasonable mastery, the stress-resistant person takes charge of their problems and lives. They use mastery in resolving their own personnel issues without relying on others. The individuals who practice stress resistance are committed to tasks and approach problems as challenges rather than burdens.

To develop caring attachments, the stress-resistant individual understands the importance of establishing the human bond link to provide important psychological benefits. Flannery (1994) defines human attachment as “the comfort, assistance, and/or information one receives through formal (class, work, church) or informal (parties, causal gatherings) contacts with individuals and groups” (p. 39). The contacts of human attachment may be verbal, such as providing advice, or non-verbal as demonstrated by a hug. The need for human attachment appears to be biological and present at birth. This type of human-link is essential for physical safety, emotional support, and both short and long term survival. Stress resistant individuals have friends whom they may rely on during
the worst of times. If required to relocate, these individuals make new friends to provide the indispensable bond and support (Flannery, 1994).

In the domain of meaning, the stress-resistant person realizes being concerned for others gives a meaningful purpose to life that exceeds material goods. Knowing you have a purpose in life prevents boredom, which may lead to a negative stress response (Flannery, 1994).

Flannery (1994) noted six strategies, which enable individuals to become stress resistant. The six strategies are: (a) taking personnel control, (b) being task involved, (c) Making life-style choices (few stimulants, aerobic exercise, relaxation exercise), (d) seeking social support, (f) having a sense of humor and (g) espousing religious values/ethical value of concern for others.

Personal control involves self-directed behavior to seek resources. An individual must take actions of which they have control when faced with a stressful situation; these skills are the basis for reasonable mastery (Flannery, 1994).

Task involvement refers to having a reason to live or a “purpose in life” p.26). “Personal involvement in and commitment to a personally meaningful task leads to better individual health. Boredom, which is another way of describing lack of task involvement, is a powerful negative life stress in its own right and is better avoided. Stress resistant persons are rarely bored; they make it a point to find meaning in life” (Flannery, 1994, p. 26).

Life-style choices refer to healthy behaviors that reduce stress and deter
unhealthy complications. Unhealthy stimulants exacerbate the body's stress response and produce a heightened sense of anxiety. Additional, healthy choices such as regular exercise and relaxation techniques are well known measures to offset negative effects of stress and enhance psychosocial well being.

Social support (caring attachments) pertains to helpful interactions with other human beings. Caring attachments have been found to have many physical and psychological benefits for stress resistance.

Humor is important to individuals. “It helps to keep problems in perspective, and appears to reduce the physiology of stress” (Flannery, 1994, p. 28). Lastly, the category of religious values basically refers to concerns for the welfare of others. Individuals who practice the ‘Golden Rule’ may not be active church, synagogue, or mosque attendees, but decisions which guide their daily lives are influenced by ethical concerns for others (Flannery, 1994).

The six strategies of the Stress Resistant Person can be integrated in the three domains of reasonable mastery of daily events, caring attachment to others, and meaningful purpose in life. Taking the steps to integrate the concepts described in Flannery’s (1994) Model of Stress Resistance with a self-assessment of nurses’ preparation for deployment is a way to evaluate whether a nurse sees herself/himself as more stress resistant and better prepared to meet the rigors of a deployment mission. As PROFIS personnel prepare to deploy for either a wartime mission or MOOTW, the three domains of mastery, attachment
and caring become an essential component of that preparation.

The final outcome of this study is to determine if the PROFIS personnel perceive a state of readiness for deployments. In other words, does the individual feel they are or are not properly prepared to deploy and fulfill their military mission?

**Significance of Study**

PROFIS personnel must be ready to provide quality-nursing care in a variety of deployment environments which may be dangerous and austere in nature. They must possess the competency skills needed to function in different field environments. Depending on the area of deployment, there may be a high degree of patient variability and most certainly restricted technology. However, most of the PROFIS personnel competency skills are acquired in a fixed medical facility with unlimited resources and sophisticated technology (Reineck, 1999). It is imperative that the current level of competency of PROFIS Personnel be explored in the combat support area and specific competencies be identified to ensure deployment readiness at any given time. There is a definite need to identify and measure the competency skills and knowledge, which greatly impact on deployment readiness (Reineck, 1999).

Development of a specific core competency tool for combat support hospitals can be employed to provide a systematic structure in which to assess deployment readiness and provide focused training for personnel. These
systematic structures may prove useful to other Services in maintaining mission readiness (Schmidt, personnel communication, 2001).
Chapter 2: Literature Review

Introduction

The purpose of this study is to identify the perceived readiness of the United States Army Professional Filler System (PROFIS) personnel in regards to nursing competency and readiness for deployment during combat missions or Military Operations Other Than War (MOOTW).

In order to achieve mission goals PROFIS personnel (Army Nurse Corps Officers and their enlisted counterparts) must be ready to provide quality-nursing care in a variety of deployment environments. These specific sets of nursing personnel acquire both basic and core competency skills in a military treatment facility (MTF) with comparatively limitless resources and sophisticated technology (Reineck, 1999). Zadinsky (1996) relates PROFIS nursing personnel must possess specific competency skills to function in field environments which are not practiced routinely in the MTF. These competency skills include increased autonomy, using manual field equipment, providing general nursing care in a combat setting and moderate to high diversity in care scenarios provided in a possibly dangerous and austere environment.

PROFIS nursing personnel are expected to provide quality patient care during peacetime, combat missions and in Military Operations Other Than War. Three issues which influence achievement of mission goals are competency, readiness training and psychosocial well-being.
It is vital nursing personnel be properly trained to ensure competency and readiness for deployment and to provide quality nursing care in a field milieu.

An extensive review of the literature was conducted utilizing CINHAL, ERIC Databases, the University of Tennessee at Chattanooga Library catalogs and interlibrary loans and the World Wide Web. Key words used to locate resources related to competency, readiness training, and psychosocial well-being were: nursing competency, military deployment, military readiness, military training and stress.

**Literature Review related to Competency**

**Competency Framework**

The research study utilizes Patricia Benner’s (2001) Model of Novice to Expert for the framework relating to competency. Benner contends that a nurse’s role in providing quality patient care is situational. He/she progresses through five different levels of skill acquisition and development. The levels begin with novice and culminate with expert. As described by Benner (2001), there is a knowledge difference in “knowing that” as opposed to “knowing how.” “Knowing that” is the way one establishes understanding by applying relationships between events. “Knowing how” is the actual skill acquisition developed ahead of scientific explanations.

The model posits that as the nurse progresses through the levels of proficiency, four different levels of skill performance are demonstrated:

1. movement from reliance on abstract principals to the use of concrete
experiences;
(2) a change from rule based thinking to intuition;
(3) a shift from viewing situations as a whole to that in which only certain parts are relevant to the situation; and
(4) the passage of detached observer outside the situation to that of an active participant fully engaged in the situation (Tomey & Alligood, 1998).

Benner indicates the competent nurse is one which is typified by functioning in the same position for two to three years. They begin to view their actions in long-range goals of which they are consciously aware. Their plans determine which issues are most important and must be addressed from those, which may be ignored. Although they lack the speed and flexibility of the proficient nurse, efficiency and organization is achieved through careful planning (Benner, 2001).

Benner’s model provides a systematic framework for identifying, defining, and describing clinical nursing practice. She concludes, “a nurse’s clinical knowledge is relevant to the extent to which its manifestation in nursing skills makes a difference in patient care and patient outcomes” (Tomey & Alligood, 1998, p.168).

Nursing is practiced in real life situations with real world constraints, possibilities and resources. Certain environments may influence the individual’s ability to respond effectively. As nurses accrue clinical knowledge over time through experience and the sharing of knowledge with peers, there is a need for
documentation of the clinical knowledge. Performance measurements can only be as useful and precise as the competencies selected to be measured (Benner, 2001).

Benner’s model provides an appropriate framework to guide the development and monitoring of perceived competencies skills needed as PROFIS personnel prepare for deployment with a field unit in wartime or MOOTW. Her model provides five levels from novice to expert as a framework for assessment. Military nursing competency may also be assessed through a five tier framework of “not competent to proficient” which equates to Benner’s model.

General Competency

Competency influences the quality of care provided in any venue of nursing. In order to understand its significance, one must first have a thorough understanding of the definition of competency. It has been discussed in a multiplicity of ways. McGregor (1999, p. 289) defines competency as a “level of knowledge or skill required to function effectively.” Gee (1995) suggests competency varies with the situation, is complex, and reflects not only skill, but impacts on patient outcomes. Gee (1995) notes, “Competency requires choosing appropriate methods, e.g. decision analysis, which while restricting professional freedom, may produce better outcomes” (p. 639). Another definition of competency is the “ongoing process used to evaluate and document an individual’s knowledge, skills, and ability to perform a specific job” (Department of
Nursing Administration Policy, 2001). Percival, Anderson, & Lawson (1994) describes competency as “the ability of a person to fulfill the nursing role effectively and/or expertly.” Benner, Tanner, & Chelsa (1992) see competency as the “result of being taught by actual clinical situations and the actions of other health care workers” (p. 20).

Military Clinical Competency
Reineck (1999) notes military clinical competency “includes the ideas of technical proficiency, ability to use nursing skills with field equipment, physical assessment skills, clinical decision acumen, and trauma / triage skills” (p. 253). Moreover, competency is related to flexibility and the ability to function in nontraditional roles (Reineck, 1999). Competency in nursing profession ranges from a minimal understanding and application of nursing science (beginner), to the expert practice level acquired through numerous years of experience. Developing and maintaining competence in the age of nursing shortages is of the utmost importance and thus recognized a priority in the nursing profession (McGregor, 1990). Reineck (1999) also indicates clinical competency has been noted as the most important component of individual readiness (the ability to train, maintain, and sustain to meet mission goals). In a combat support environment, clinical competency is seen as part of three areas; “(1) military specialty – related skills; (2) military unique skills over and above what you normally do in your work place; and (3) trauma intervention capability” (Reineck, 1999, p. 253). Clinical competency skills utilized in a combat environment have
been documented to be above and beyond those routinely used in a MTF. These competencies include increasing autonomy, implementing orders without a physician, triaging, improvising with shortage of supplies, using/trusting your senses during assessment without the benefit of high technology equipment, and caring for a greater diversity of patients in a harsh setting (Zadinsky, 1995; Norman, 1986; Norman, 1990; Stanton & Bandiero, 1998).

Nursing personnel (RN, LVN, and CNA) working in the medical facility must possess competency in critical thinking, physical assessment, psychomotor skills and operation of patient care equipment. Thus, developing and maintaining competence requires life long learning (Patterson, Crooks, & Luny克-Child, 2002).

An emphasis on competency-based learning has begun to emerge in the medical facilities. Competency-based learning utilizes a teaching - learning process that is individualized and emphasizes what an individual must know and do. Core competency learning, and skill acquisition is documented by core competency tools developed and mandated by the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) (Tanner, 2001).

The lack of military nursing skill and knowledge competency assessment has been documented in the literature. According to Norman (1986), nurses during the Vietnam era indicated government planners assumed nurses would perform typical nursing duties. No one envisioned the need of prior training in dealing with cultures of very different people while utilizing competency skills outside their customary practice. Nurses reported they felt they had been ill-
equipped to cope with the stress and physical requirements of long hours caring for traumatic war injuries resulting from large-scale military attacks.

In her research study, Norman (1986) conducted interviews with fifty women regarding their Vietnam experiences. Due to the lack of any accessible government list, names of prospective individuals were acquired via a “snowball sampling technique.” This method of convenience sampling is an approach by which early sample participants identify and refer others who meet the eligibility criteria of the research (Polit & Hungler, 1995). Initially, a group of four women were interviewed. They provided the names of other prospective nurses who served in Vietnam.

The earliest nurses arrived in Vietnam in 1965. The last nurse left in 1973, representing the complete span of time the interviewees were involved in the conflict. The first interview occurred in November, 1983. The last interview was conducted in December, 1986. At the time of the interview, 52% of the nurses were between the ages of 35-39; 44% were married. Prior to their tour in Vietnam, 72% of the nurses had six months to two years of professional nursing experience. Ten percent of the nurses had previous overseas experience prior to Vietnam with two having served in Korea.

The interviews consisted of seventy-five open and closed ended questions. These questions were divided into three major time frames: prior to, during, and after the Vietnam Conflict. During the interview, the two nurses with both Korean and Vietnam experiences related several differences between the two conflicts.
The nurses remarked Korea had a front line; however, the conflict in Vietnam was “all around us.” The nurses indicated they felt they were always under the danger of attack. Casualties brought to the hospitals were much worse during Vietnam in comparison to Korea. The nurses mentioned the remarkable differences in casualties, they felt, were related to the improvement in evacuation techniques.

As a result of her study, Norman (1986) noted competency and readiness training for deployment depended on the branch of service. Navy nurses were mandated to serve one two-year tour prior to being deployed. Air force nurses received flight–school training prior to deployment and spent their first weeks in Vietnam with an instructor in different aircraft. Army nurses received training on shooting a gun, suturing, and performing tracheotomies.

Several other issues surfaced regarding competency during the Vietnam Conflict. In her later book, Norman (1990) purposes there was little preparation for nursing personnel regarding complex procedures and 24 hour days filled with traumatic war injuries resulting from large-scale military attacks. To compensate for the lack of training, they sought out individuals with whom they were comfortable, until they gained confidence in their own skills. Also, the nurses related competency training did not cover information on health beliefs or the culture of the Vietnamese population, which they felt was of great importance (Norman, 1990). Cultural competency has been defined by Abrums & Leppa
(2001) as “sensitivity to issues, related to culture, race, gender and sexual orientation” (p. 270).

In discussing cultural competence, Hadwiger (1999) indicates this area of competence is a critical requirement for all nursing personnel. The author identifies cultural competence as a process of working with individuals of a different cultural background than their own. He notes there are four cultural competence areas: cultural awareness (aware of one's own beliefs, values and biases) cultural knowledge (knowledge a nurse acquires regarding a different culture), cultural skill (nursing skills in conducting a cultural assessment) and cultural encounter (exposure to individuals of a different culture). In regards to cultural practices, Baker & Ryals (1999) stress mission planners and deployed forces should have a thorough understanding of local culture and customs to prevent outbreaks of hostility due to inappropriate behavior. This concept is especially important during military operations other than war (MOOTW). As the diversity of military deployments increase, nursing education and competency training has evolved to reflect the diversity.

Palmer (1991) relates changes in nursing education and competency directly contribute to the affects of nursing care during wartime or MOOTW. Beginning with the Crimean War, Florence Nightingale identified the basic nursing skills which are still taught today. Dorothy Dix organized basic nursing care and taught nursing skills to nursing personnel during the American Civil War. The need to establish nursing skills training was a direct result of the Civil
At the end of the Spanish-American War, the Army and Navy Nurse Corps were formed to meet the demand of quality nursing care for military members. Experiences in World War I led to the establishment of the Army School of Nursing at Walter Reed Hospital and specialization in nursing.

The need for increased competency skills regarding medication administration resulted from the advent of antibiotics and anti-malarial therapy and the introduction of blood transfusions during World War II. With the establishment of the National League of Nursing in 1952, standards were set down for accrediting nursing programs which led to the standardization of nursing competency skills.

Korea saw the establishment of the Mobile Army Surgical Hospital (MASH) presenting new competency challenges to the professional nurse. These competency challenges related to the expanding volume of patients, profound fatigue, shortage of supplies and the beginning of nursing improvisation in a field environment. With Vietnam, nursing personnel gained independence in decision-making skills resulting in increased competency in critical thinking due to countless massive causalities (MASCALS), no diagnostic equipment, low ratio of physicians to nurses and an increase in resuscitative and trauma treatment.

Desert Storm introduced the Deployable Medical System (DEPMEDS), a new type of hospital, which could be moved at a moment’s notice. A new set of competency skills were recognized with this system. Nursing personnel needed skills in layout and building of the hospital in order to have the hospital up and
functional within 72 hours. In addition, skills were needed for the introduction of new field medical equipment. These competency skills were acquired through hands-on training during deployment. (Palmer, 1991).

Zadinsky (1996) notes nursing personnel continue to execute skills during deployment not characteristically performed in a medical treatment facility (MTF). Whether deployed during wartime, MOOTW, or humanitarian missions nursing personnel must provide general nursing care functioning with low technology, utilizing manual equipment, with a moderate to high diversity in care scenarios.

Due to the high diversity in wartime casualties verses civilian practice, Stanton & Bandiero (1998) stated nurses need special training to enhance their clinical competency skills. The authors conducted a study of nurses (N=340) from multiple military branches with deployment experience. The nurses were involved in WWII, Vietnam, Korean War and Operation Desert Storm.

In Stanton & Bandiero’s study, a majority of the respondents were on active duty at the time of the deployment. Ten percent of the respondents indicated they were reservists called to active duty at the time of the conflict. Ninety-seven percent of the respondents served in the combat zone, near the area of conflict with 67% of the nurses having less than one-year active duty experience upon deployment. Eighty-four percent of the respondents were 30 years or younger in age while serving in the war zone.

The results of their study indicated that 80% of the nurses felt their military training prior to deployment was inadequate. The pre-deployment training did not
meet their clinical and physical needs nor prepare them for physiological stressors encountered in a wartime environment. Chi Square analysis indicated no statistically significant difference between nurses of different branches or wars regarding their attitudes toward pre-war preparation. The nurses ranked clinical skills as the highest priority for prewar preparation. Emotional and coping skills were ranked second followed by soldier skills.

During the study the nurses were asked to rank differences between military and civilian nursing. According to the participants military nursing involved more: “(a) autonomy than peacetime or civilian nursing, (b) complex casualties, (c) deviations from traditional nursing, (d) hours, and, (e) need for adaptability” (Stanton & Bandiero, p. 3, 1998).

Leadership Competency

Another area of competency skills pertains to those of leadership. Connelly (1998) notes military nurse managers operate in a unique environment that is both similar and different from that of the civilian role. Military nurse executives must be concerned with readiness issues, frequent deployments and utilization management, utilize delegation and be able to train others in leadership roles. Similarity, Thomas & Hume (1998) relate civilian nurse managers and leaders must be able to delegate task and train other nurses in delegation skills. Delegation has become a job expectation in both milieus of nursing.
Operational Competency

The final area of competency to be addressed is operational competency. Operational competency is noted as those competencies needed to perform in a certain environment. In a field environment, nursing personnel rely on operational competencies as well as clinical competencies to accomplish the mission.

In a study of 100 air force nurses Staggers (1999) stated, “Determining concise, critical mobilization competencies are imperative” (¶ 1). Currently, Staggers (1999) notes, deployment competencies do not reflect medical doctrine and are deficient in skills needed for MOOTW. Formulating concise deployment competencies can serve as a framework for consistent readiness training prior to deployment (Staggers, 1999).

Literature Review related to Readiness

Olson (1997) defines readiness as the “ability to train, maintain, and sustain to meet mission goals” (p. 76). Reineck (1999) describes individual readiness as a “dynamic concept with dimensions at the individual, group, and system levels which, together, influence one’s ability to prepare to accomplish the mission” (p. 253). In a study of 180 army reservists, Agnew (2000) noted “operational readiness of the U.S. military depends on high levels of health and mission-oriented training of all it members” (¶ 1). Agnew (2000) also remarks “nurses play a major role in maintaining and restoring the health of service members and thus have opportunities to impact on readiness” (¶ 1).
In military operations other than war (MOOTW) research studies stipulate the operations present a different type of environment and casualty risk than traditional cold war. Nursing personnel must have a good understanding of and be proficient in the concept of triage. Baker & Ryals (1999) relates realistic readiness training prepares individuals to function together in any austere environment. They report medical units and combat support hospitals are staffed, configured, and supplied to meet wartime missions which involve young, healthy adult male trauma patients and prisoners of war (POW). In contrast, MOOTW is substantially different involving local nationals and refugees, which offer unique challenges for personnel. Therefore, readiness training should encompass both combat and MOOTW skills. The authors stress the need for a thorough understanding of the concept of triage prior to deployment. Also, in preparation for deployment, the authors relate nursing personnel deployment teams should be aware of cultural, religious and ethical practices. (Baker & Ryals, 1999).

Griffiths (1990) makes several recommendations based on his experience from Vietnam. He emphasizes readiness training should include exercises in triage, mass casualties, and evacuation. He found the most difficult situation in combat to be the mass casualty. Griffiths indicates training must be realistic to ensure proper understanding of the concepts of triage. He notes it is not enough to recognize which injuries are priority, but personnel should also train within the limits of supplies, personnel, and blood to be realistic. In combat or MOOTW, he
notes, nursing personnel must function without sophisticated equipment and depend on their knowledge and training, and be innovative in treating casualties, adapting to the situation as needed (Griffiths, 1999).

Olson (1997) relates the Army Medical Department (AMEDD) must adapt its readiness training to focus on both wartime and MOOTW, such as humanitarian missions. He notes with the changes in strategic focus, military operational doctrine must revise their tactics, techniques, and procedures. Training must be adapted to address the types of injuries, environments and situations encountered today. Reineck (1999) conveys deployment readiness does not always signify overseas missions. She notes the National Disaster Medical System has determined the nation must be prepared for massive causalities due to future disasters in homeland defense. Regarding operational readiness, Olson (1997) relates nursing personnel are not familiar with the equipment used in a field environment. Alas, standards of care suffer due to their lack of knowledge and skills.

Kennedy, Hill, Adams & Jennings (1996) also stipulate, “readiness is the single variable that distinguishes military nursing from civilian nursing” (p. 33). The authors note the Army Surgeon General defines readiness as “the yardstick by which we measure everything we do” (p. 33). Army nursing personnel are responsible for sustaining the health of the soldiers on the battlefield and must be prepared to provide that care during diverse contingencies. To ensure overall readiness, nursing personnel must be extremely flexible, proficient in a variety of
roles and responsibilities, competent in setting up and dismantling tents, possess the stamina to endure long hours of work without rest, while dealing with large numbers of critically injured patients during natural disasters or major conflicts (Kennedy, Hill, Adams & Jennings, 1996).

In a study conducted by West & Clark (1995) the authors describe experiences from 90 nursing personnel deployed to Somalia in 1992 during Operation Restore Hope. The nursing personnel related that assuming everything which is available in peacetime will be available in a theater of operation is not viable. Nursing personnel had to adapt to filth, difficult living conditions, blowing sand, lack of supplies, discomfort and danger. They had to be flexible and innovative. The authors expressed nursing personnel must be competent in basic skills encompassing weaponry, personal defense, fieldcraft, and providing nursing care to people of different cultures with different values.

Ekbald (1990) expresses his concerns regarding the training of the field medic (enlisted nursing personnel). He indicates the need for a standardized approach to train and evaluate the medic’s competency for combat as he/she is the first person who treats the patient. He recalls during Vietnam, basic skills including triage, survival skills, and use of field equipment, were learned late and influenced patient care. The author stresses a more systematic approach must be developed for training and ensuring readiness. Additionally, Sebasta (1990) relates his experiences in Vietnam regarding mission readiness. He indicates refresher training prior to deployment must include, training in “doing more with
less”, and proficiency in triage as priority competency skills. Furthermore, Stanton & Bandiero (1998) indicate even simple health habits such as hair washing and showering become complex in a combat environment. Nursing personnel should be prepared, prior to deployment, to physically cope with the austere environments. Training in basic personal survival skills will enhance the preparation and the nursing personnel's quality of life during deployment situations.

In order to track readiness of military units, the Department of Defense (DOD) established a system known as the Status of Resources and Training System (SORTS), which when utilized, assesses readiness at the unit level, joint force level, and strategic levels. This tracking system grew from the need of congress requiring reports of military readiness. Unit level readiness refers to the “ability of each unit to deliver the outputs for which it was designed” Gebicle, 1998, p. 3). The basis for unit level readiness assessment is the SORTS (Gebicke, 1998).

With the SORTS, unit readiness is reported using a “C” scale. The report includes status regarding personnel, equipment, supplies, and training. C1 indicates fully mission ready while C4 indicates least mission ready (Gebicke, 1997). Gebicke (1997) notes a need for a better, more concise method for evaluating mission readiness. In a report by Defense Health Care (1995) combat medical units deployed during the Gulf War were not prepared to fulfill their wartime mission according to SORTS. The 1995 report encompassed
information relating to mobilization plans, which were out of date or untested, the number of medical personnel who were non-deployable either due to physical problems or insufficient training.

As indicated, there is a need for a more efficient method for evaluating mission readiness. Utilizing the Readiness Estimate and Deployability Index (READI) (Reineck, 1999) and establishing a core competency tool to formulate concise deployment competencies, will ensure succinct readiness deployment training. Nursing personnel must be trained to function efficiently for the next military deployment. If medical personnel are not trained effectively, Sebasta (1990) states, “many will die as lessons are relearned” (p. 227). Army nursing personnel are at risk for being unprepared for the next millennium. Individual readiness must be a priority for all nursing personnel. “Readiness is fundamental to army nursing—readiness for deployment, readiness for the future of health care” (Kennedy, Hill, Adams & Jennings, 1996, p. 36).

**Literature Review Related to Psychosocial Issues**

A third issue, which impacts on competence and readiness, is the psychosocial issues dealing with deployment. Nursing personnel are separated from families in unfamiliar territory. They must adjust to living in close surroundings, without the luxuries of everyday living. Isolated from the rest of the world, nursing personnel turn to wartime friends to meet the needs of family. Friends form groups and the groups became “families.” These “families” made nurses feel needed, protected, and loved (Norman, 1990). Flannery (1987) notes
the support of human beings depending on one another during is significant in reducing stressful situations (Flannery, 1987). Stanton & Bandiero (1998) documented nursing personnel sought camaraderie while deployed. Sharing and caring for patients were identified as critical aspects of intratheater support by their sample group. The authors indicated the special bonds formed during and remaining after the deployment experiences were critical to the nurses well-being.

Flannery, (1994) states there are three domains that affect our sense of well-being and good physical and mental health. These domains are known as reasonable mastery, caring attachments to others and a meaningful purpose in life. As psychosocial issues are a major factor in deployment, the three domains become very relevant to military training and deployment readiness. The domain of reasonable mastery encompasses the feeling competence relating to clinical skills, operational skills, soldierly skills, personal, physical readiness and psychosocial skills. The domain of caring attachment relates to the ability to adapt to group integration and establish a link to the group’s identity, becoming part of the unit. The third domain, domain of meaning, centers on leadership and administrative support of nursing personnel. They must feel leaders support them and keep them informed during wartime or MOOTW. Taking the steps to integrate the concepts described in Flannery’s (1994) Model of Stress Resistance with a self-assessment of nursing personnel preparation for deployment is a way to evaluate whether nursing personnel sees herself/himself
as more stress resistant and better prepared to meet the rigors of a deployment mission.

Flannery (1990) notes the need of strong social support that begins with birth and is needed throughout life for physical safety, survival, and emotional wellness. He explains veterans in Vietnam had less stress-related symptoms and established better general adjustments if there was support from friends and relatives, felt they were members of their unit, and were supported by leaders if they had a problem.

Dixon & Dixon, (1984) describe two phenomena, which occur with people who live in groups. First, people who live in groups are dependent for survival with the other members of the group. Second, viability of the group is dependant on the contribution of the members. Reineck (1999) notes group integration or coming together as a team provides a sense of “one.” As a group achieves integration, there is a willingness to assist and train subordinates and other members of the group for the benefit of the individual as well as the group. Being part of a group fills the gap experienced as a result of family separation. This decreases the stress of deployment.

Nurses in Vietnam mentioned several issues which compounded their stress in the combat environment. These issues included adaptation to close living quarters in tents, huts, or small rooms; cold showers, and very little privacy. Additionally, many found it difficult to sleep due to wartime noises and fear of the
unknown. The nurses experienced moral dilemmas and the stress of caring for severe, multiple-trauma patients their age or younger (Norman, 1990).

The majority of Norman’s research participants (1986) noted training films, discussion groups and practiced treatments did little to prepare them for the reality which confronted them during the conflict. They indicated they were not prepared for the stress and futility of watching young men die. The nurses also remained disturbed regarding the fate of the patients who left their wards. There was never any closure (Norman, 1986).

Military combat readiness encompasses both physical and mental readiness which is linked to a state of well-being (McRae-Bergeronm, May, Foulks, Sisk, Chamings, & Clark, 1999). The authors describe personal stressors as the fear or anxiety one feels. They explain interpersonal stressors as the physical well-being, satisfaction, or depression one senses. The authors indicate stress-reduction techniques should become part of military readiness training.

During a humanitarian mission, Britt & Alder (1999) related the underestimation of stress experienced due to isolation and inability to help the local population during humanitarian missions. Their research involved 35 personnel (27 men and 8 women) deployed on a six-week mission to provide medical humanitarian assistance in the Soviet Union. Differences between pre-deployment and mid-deployment stressors increased extensively. Figure 1 below depicts the differences participants experienced.
How Much Experienced (very low to very high)

Figure 1. Differences in anticipated versus experienced stressors. All differences are significant at p<0.05. From “Stress and Health during Medical Humanitarian Assistance Missions,” by T. W. Britt and A. B. Adler, 1999, *Military Medicine, 164*, p. 277. Copyright 2003 by the Republication Licensing Service Copyright Clearance Service. Adapted with permission of the authors.

Coping strategies decreased regarding dealing with stress between anticipated and actual use. Figure 2 represents the decrease in coping strategies pre and mid-deployment.
The authors note the importance of considering the nature of the service member’s occupation on military operations and to understand both the stressors and the potential self-protector factors involved in the diverse military operations in which service members participate. It is imperative readiness interventions be
developed to decrease the negative stressful effects of deployments while increasing positive benefits (Britt & Adler, 1999).

Stress may lead to depression without utilizing proper coping skills and could impact on competency readiness skills. Norwood, Ursano & Gabbay (1997) define stress as the "physiological and/or psychological reactions an individual experiences in response to an external event (stressor)" (p. 643). They express coping to be a cognitive or behavioral effort a person makes to manage tasks that exceed personal resources. The authors indicate stress is an on going process in which an individual must determine if the stressor constitutes a potential threat. Military service itself encompasses many stressors. Preparing for mission readiness in a combat situation, dealing with toxic hazards, exposures to harsh environments, and degree of physical treat to self or others, all may have an impact on individual health and increase individual stress. Norwood & Ursano (1997) indicate the importance of realistic training as a protective factor to reduce stress.

**Summary**

As indicated by the literature review, three areas impact preparation for deployment either to combat or MOOTW. These three areas are competency, military readiness, and stress. Of the three, competency has been documented to be priority for nursing personnel. Benner’s Model of Novice to Expert provides an excellent framework to establish and assess levels of nursing personnel competency relating to readiness. In order to ensure competency and
deployment readiness for nursing personnel, succinct training must be established. Training should be guided by mission goals and measured by a core competency tool to ensure nursing personnel feel competent, ready to deploy at any given moment and accomplish their mission of conserving the fighting strength.
Chapter 3: Methodology

Design

The purpose of this study was to identify the perceived readiness of United States Army Professional Filler System (PROFIS) personnel in regards to nursing competency and readiness for deployment during combat missions or Military Operations Other Than War (MOOTW). Based upon the findings of the research study, recommend suggestions for the development of a core competency tool designed specifically to meet the needs of a combat support unit. The research design was a descriptive one which had as its purpose to answer the following research questions:

1. Are there differences in perceived competency skills required for deployment in the combat support arena among PROFIS personnel assigned to the fixed facility?

2. Are there differences in perceived competency levels among PROFIS personnel assigned to various fixed facilities?

Sample

The selected Army Nurse Corps Officers and their enlisted counterparts who are assigned as PROFIS Personnel to a combat support unit in the 1st Medical Brigade were utilized as subjects. These nursing personnel work in two of the nine different medical treatment facilities (MTF) across the Great Plains Regional Medical Command (GPRMC). The selection of only two MTF’s for research study was mandated by TriService Nursing Research, the grant funding
agency for the study. An army community hospital and an army medical center were chosen for statistical comparison of nursing competency and readiness for deployment. The MTF’s selected for the study were Darnall Army Community Hospital (DACH), FT. Hood, TX and William Beaumont Army Medical Center (WBAMC), FT. Bliss, TX. The sampling frame (N=364) consisted of the names and unit address of personnel assigned a PROFIS position in these two locations. According to COL (ret) Reineck, former Medical Command (MEDCOM) Chief Nurse, the sampling frame was an adequate representation as it covered about 50% of entire GPRMC PROFIS population which was approximately 750 PROFIS personnel. She indicated this was actually somewhat homogeneous on the topic of readiness (Reineck, personal communication, 2002). The names and addresses were requested through points of contact at the individual medical facilities. The list was kept in a locked file accessible only to the primary investigator. Participants were invited to complete the survey via an electronic address. Instructions on completing and submitting the survey, as well as the electronic address, was provided as part of the introduction/consent letter.

Limitations

The following limitations were identified for the study:

1. The sample was a purposive sample.

2. Difficulties participants may have encountered in accessing a computer for completing the survey.
3. The inability of the researcher to discern computer skills prior to the delivery of the research letter.

Procedure

Permission to conduct the research was obtained from the University of Tennessee at Chattanooga human research committee (Appendix A) and the internal review boards at Brooke Army Medical Facility (Appendix B) and William Beaumont Army Medical Center (Appendix C). The research proposal underwent extensive scientific review by the TriService Nursing Research Committee and was funded was funded for study to begin in June 2002 (Appendix D). Permission to conduct the research was also solicited and granted from the Chief Nurse, GPRMC (Appendix E) and the prospective Chief Nurses of the individual MTF’s (Appendices F & G).

The research was conducted in two phases. The initial phase consisted of a pilot test/retest of the electronic survey tool to establish reliability and validity. An initial sample of 30 PROFIS participants assigned to Darnall Army Community Hospital was invited to take part in the pilot study. Introduction/consent letters (Appendix H) were placed in sealed addressed envelopes and bulked mailed to a point of contact (POC) located at the perspective MTF’s. The letter (Appendix H) contained a brief explanation regarding the nature of the research, the electronic address, instructions for completing the electronic survey, a request to complete the survey within the two weeks, and the assurance of anonymity and confidentiality. The point of contact distributed the sealed envelops to the
participants. Of the initial 30, two left the army and three changed duty stations during the pilot study. Data collection for the pilot study occurred between 7 August 2002 and September 30, 2002.

An electronic email reminder was sent to the potential participants by the POC at the MTF regarding the pilot test at the end of the first week. Nine out of 25 participants (36%) completed the pilot study. The results were analyzed using the Pearson’s r for statistic of correlation. The electronic version was found to be comparable to the previous pencil-paper version. The only changes made to the electronic survey post the pilot test were typographical corrections and corrections to the web form. No other changes were recommended.

The second phase, the major portion of the research study was conducted between October 16 – December 30, 2002. Introduction/consent letters (Appendix I) were placed in sealed addressed envelopes and bulked mailed to the POC’s at the perspective MTF’s. The POC’s distributed the introduction/consent letter to the potential participants. The letter (Appendix I) contained a brief explanation of the nature of the research, the electronic address, instructions for completing the electronic survey, an internet resource card designed as a research incentive, a request to complete the survey within the next 30 days, and the assurance of anonymity and confidentiality. A reminder postcard (Appendix J) addressed to the individual participant was sent via bulk mail to the POC’s three weeks after the original mailing. According to Polit & Hungler (1995) mail administration is often used with self-administered
questionnaires and normally results in a 60% return but is not uncommon to receive a lower response rate. Follow-up reminders have achieved greater returns and should be typically sent in 2-3 weeks past the initial mailing (Polit et al, 1995). This study combined both mail and electronic communication methods to petition participation in the research.

An advantage to using an electronic survey over paper includes speed of data access, lower cost of copying, postage, and data entry. Linking the electronic survey directly to a database or spreadsheet eliminates manual entry and data entry errors. As indicated in the literature, most of the cost of web-based surveys occurs at the beginning during the construction and placement of web survey (Duffy, 2002).

Studies in the literature also indicate some disadvantages with the use of electronic surveys. The researcher has no knowledge of the environmental conditions under which the participant completes the survey. Also, differences in computer literacy, computer equipment, screen configurations and connection speeds may influence the participant’s response to the electronic survey (Dillman, Tortora, & Bowker, 1999 & Duffy, 2002).

The number of surveys being conducted over the Internet has increased dramatically. The capability of being able to collect large amounts of data without interviews, stationary or postage and to process answers without data entry is very intriguing (Dillman, Tortora, & Bowker, 1999).
The electronic version was coded in order to extract the replies of the surveys from a data base for statistical application. It was also coded to the installation of the individual responding for tracking purposes only. Utilizing the electronic survey insures greater confidentiality and anonymity for the responding participates in comparison to the paper version. Additionally, the use an electronic survey will minimize the occurrence of a Hawthorne effect which may occur with a paper-pencil version. The Hawthorne effect is “the effect on the dependent variable resulting from subjects awareness that they are participants under study” (Polit & Hungler, 1995, p. 703).

The window for survey participation was 60 days. The total number of surveys completed at the 30-day and 60-day mark were tracked and included in the research analysis. Of the initial 364, 14 were found not to meet the PROFIS criteria, four left the military, one was deployed, two had changed duty stations, and five were on temporary duty status away from their military duty station, which resulted in a sample size of 338 participants eligible to complete the survey.

Protection of Human Research Subjects

The point of contacts and the primary researcher received training via an internet-based continuing medical education program. The activity entitled “Human Participant Protection Education for Research Teams” was required by TriService Nursing Research to ensure research protection for all participants. Protection of human research subjects were addressed in all of the
proposals submitted to internal review boards during solicitation for permission to conduct the research study. Anonymity and confidentiality were assured as the research participants completed the survey via electronic submission. No identifying data could be traced back to the individual participants. The tool was coded only for ease of MTF identification and level of nursing (RN, LPN and CNA) for statistical analysis. Completion and submission of the survey indicated consent from the subject to participate in the research study.

**Instrumentation**

The survey utilized for this study is the Readiness Estimate and Deployability Index (READI) (Appendix K) designed by COL (ret) Carol Reineck and associates. It contained demographic data as well as scaled questions. The tool was a result of a three-phase research project to improve nursing readiness assessment. In Phase I, expert panel members met and identified six areas of nursing deployment readiness: 1) Clinical Nursing Competency, 2) Operational Nursing Competency, 3) Soldier/Survival Skills, 4) Personal/Psychosocial/Physical Readiness, 5) Leadership and Administrative Support, and 6) Group Integration and Identification. Subject matter experts in each of the identified areas developed questions for the initial READI survey. Validity for the items was estimated by content validity testing technique utilizing eight content experts. The experts rated each individual item on a scale of 1 (low) to 4 (high). The mean ratings were 3.6 for clarity, 3.6 for relevance, and 3.6 for uniqueness. Changes to the questions were made based on the
recommendation of the subject matter experts and incorporated into the initial version of the READI. (Reineck, Finstuen, Connelly, & Murdock, 2001).

With Phase II, the READI was again refined based on results of internal consistency and test-retest reliabilities from a pilot test of a sample of 31 Army nurses. "The test-retest reliabilities and internal consistency reliabilities for the six subscales are as follows: Nursing Competency Scale, had 28 items (r=.71; alpha =.94). Operational Nursing Competence scale had six dichotomous, unscaled items (r=.48). Soldier and Survival Skills scale ten items which demonstrated the strongest psychometric results (r=.83; alpha=.91) among all the scales. Personal/Physical/Psychosocial scale had 8 heterogeneous items (r=.78; alpha=.73). Leadership and Administrative Support scale had four items (r=.69; alpha=.83). The Group Integration and Identification Scale had three dichotomous items (r=.69; alpha=.72)” (Reineck et al, p. 932, 2001). The result of this testing was a revised, 105 item survey tool which measures self-report of cognition, affect, perception of psychomotor skills, and physical ability related to the six areas of nursing readiness. The revision was once again administered to three separate groups of Army nurses (n=27, n=34, n=32). It was possible that the Hawthorne effect may have occurred because there was no control over the survey environment and the presence of the investigator during the administration of the READI. The READI is a valid and reliable tool to be utilized in a military population (Reineck et al, 2001). Both READI tools utilized in Reineck’s et al, 2001 study and this study contained demographic data adapted
to fit the study participants. Permission was obtained from COL (ret) Reineck to adapt and utilize the READI during this research study (Appendix L & M).

The READI tool fit well with the theoretical frameworks utilized to guide the study. Patricia Benner’s (2001) model of Novice to Expert equates well with the design of the questions utilized in the tool. Benner uses a five tier format (novice, advanced beginner, competent, proficient and expert) in her model. The READI survey also encompasses a five tier format in the design of the questions which ranges from not competent to totally competent. Raymond Flannery’s (1994) three domains expressed in his Theory of Stress Resistance adapts appropriately to the individual sections of the READI. The Domain of Mastery is expressed in the sections of Clinical Nursing Competency, Operational Nursing Competency, Soldier and Survival Skills, Personal and Physical Readiness and Psychosocial Readiness. The Domain of Attachment is demonstrated in the section relating to Group Integration and Identification. Finally, the Domain of Meaning is portrayed in the section relating to Leadership and Administration Support. Thus there is logical rational supported by the theoretical framework of Flannery.

This study also utilized a Core Competency tool (Appendices N-P) which was designed by a panel of experts in a military medical facility. The panel consisted of military officers with a diverse military service background and nursing expertise. The area of concentrations represented on the panel included but were not limited to education, administration, maternal child, operating room,
emergency room and medical/surgical nursing. The core competency tools were developed according to standards mandated by JCAHO and the different levels of nursing training. The tool is initiated upon arrival of the individual to the military medical facility and follows the individual during their assigned time there. The individual rates his/her skills at the time of their arrival and continues to document mastery of competency skills over time. Mastery of core competency skills is normally demonstrated/accomplished during the initial preceptorship phase which precedes the nursing personnel functioning independently on a nursing unit.

During a recent JCAHO inspection, there were no Type I findings relating to competency. The core competency tool measured what it was intended to measure; the core competency skills of the healthcare providers according to their skill levels. Therefore, the core competency tool is a valid and reliable measure of core competency skills (Walton, 2002, personal communalization).

The purpose of the use of the core competency tool was for the principal investigator to have baseline information regarding the expected core competency skills for the individual participant’s level of nursing. The survey participants were not asked to complete any information on the core competency tool during the research study. The core competency tool is presently part of each individual’s Human Resource Folder and kept by the individual’s immediate supervisor at the respective installation. The READI documents the additional
skills needed to function independently on a nursing unit in a combat support unit.

After careful examination of both tools the following commonalities were noted in the READI tool and the Core Competency tool: competency skills which relate to Infection Control, Emergency Code Procedures, Documentation, Intravenous Therapy, Safety Issues, Leadership, Medication Administration, Use of Equipment, Team Work, Plans of Care, Fluid Balance, Physical Assessment and Blood Protocols. Differences noted pertained to Burn Care, Triage Experience, Weapon Qualification, Physical Fitness, Stress Coping Skills, and Legal Issues such as a family care plan and wills.

Data Analysis

For this study, only surveys from PROFIS personnel assigned to the 1st Medical Brigade were accepted as part of the research. Surveys were accepted up to 60 days after the initial mail-out. The link to the survey was disconnected after the 60 days. Three hundred sixty-four possible participants were provided the survey packet from the POC’s at the individual MTF’s.

Once the data were obtained from the study, the files were uploaded into SPSS for statistical analysis. SPSS 11.0 for Windows was used to analyze the data. Competency elements within the tool were scored individually. There are six subsets within the tool. Items within the subsets were as follows: Subset 1: Clinical Nursing Competency items 1-14, 18-35 are continuous variables; items 15-17 are dichotomous. Subset 2: Operational Nursing Competency items 1-3, 7-
11 are continuous variables; items 4-6 are dichotomous. Subset 3: Soldier and
Survival Skills all items are continuous variables. Subset 4 A: Personnel and
Physical Readiness items 1-2 are continuous variables, items 3-5 are
dichotomous. Subset 4 B items 1, 4, 8-13, 15, 17-22 are continuous variables.
Items 2-3, 5-7, 14, and 16 are dichotomous items. Subset 5: Leadership and
Administrative Support all items are continuous variables. Subset 6: Group
Integration and Identification all items are continuous items. Research questions
were measured by analysis of variance. A one-way analysis of variance was
used for analysis of differences in proportion between officers and enlisted and
for differences between RN, LPN, and CNA. A statistician has been employed for
statistical analysis.

Summary

This research study investigated the competency skills needed for
PROFIS personnel to function a combat support hospital during deployments in
combat of MOOTW. A minimum of 120 surveys (as mandated by TriService
Nursing Research) were needed for the study. Three hundred sixty-four were
invited to participate in the study which represented the approximate 700
PROFIS personnel assigned to the 1st Medical Brigade within the Great Plains
Regional Medical Command. An electronic version of the Readiness Estimate
and Deployability Index (READI) was utilized to collect the data for the
identification of the competency skills. Descriptive statistics and the one-way
analysis of variance were employed for statistical analysis. Data was analyzed utilizing SPSS.
Chapter 4: Findings

Introduction

The purpose of this study was to identify the perceived readiness of selected United States Army Professional Filler System (PROFIS) personnel in the Great Plains Regional Command in regards to nursing competency and readiness for deployment during combat missions or Military Operations Other Than War (MOOTW). This study correlated demographic variables of military occupational specialty/area of concentration (MOS/AOC), years in the MOS/AOC, years of military service, prior enlisted service, previous civilian training/education, previous deployments, and education level. In addition, this study identified whether a difference of perceived competency existed based on training at different military facilities. The study was conducted in two phases, which included a pilot study and the main research study.

Description of the Pilot Study Sample

The pilot study was conducted solely at Darnall Army Community Hospital. Nine participants out of 25 invited to participate completed the electronic survey during the test/re-test of the pilot study, which resulted in a return rate of 36%. Of the participants, five were male and four were female. Six of the individuals were officers and three were enlisted. Five of the nine individuals held a Bachelors Degree in Nursing. The BSN is required by the Army to enter the service as an officer and registered nurse. Of the remaining four participants, educational levels ranged from high school diploma to a Masters Degree in Nursing. Only
one individual had been previously deployed in their MOS/AOC. Two officers had prior enlisted service. All participants had field training within the current year (2002) with an average of four days training. No variance was noted in the demographic data between the test/retest phases. Table 1 illustrates the demographic data.

Table 1

*Demographic Data of Pilot Study*

<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>MOS/AOC</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perioperative Nurse</td>
<td>1</td>
<td>11.1</td>
</tr>
<tr>
<td>Medical/Surgical Nurse</td>
<td>4</td>
<td>44.4</td>
</tr>
<tr>
<td>Critical Care Nurse</td>
<td>1</td>
<td>11.1</td>
</tr>
<tr>
<td>Medical Specialist</td>
<td>1</td>
<td>11.1</td>
</tr>
<tr>
<td>Licensed Practical Nurse</td>
<td>1</td>
<td>11.1</td>
</tr>
<tr>
<td>Surgical Technician</td>
<td>1</td>
<td>11.1</td>
</tr>
<tr>
<td>Officer</td>
<td>6</td>
<td>66.7</td>
</tr>
<tr>
<td>Enlisted</td>
<td>3</td>
<td>33.3</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>19-30</td>
<td>6</td>
<td>66.6</td>
</tr>
<tr>
<td>31-40</td>
<td>1</td>
<td>11.1</td>
</tr>
<tr>
<td>40+</td>
<td>2</td>
<td>22.2</td>
</tr>
</tbody>
</table>
The survey consisted of six subsets. The subsets were analyzed using Pearson’s r for statistic of correlation. A Pearson’s r is a statistical test utilized when data is compared or measured on an interval or ratio scale. The correlation coefficient depicts the strength between the compared data (Polit, 1996). Due to the small sample size, the coefficients are depicted as “strong” (.7-1.0), “medium” (.4-.69) and “weak” (.1-.39). Table 2 demonstrates the analysis of correlation.

Table 2

Pilot Study Reliability Correlation (n=9)

<table>
<thead>
<tr>
<th>Survey Subset</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Nursing Competency (n=35 items)</td>
<td></td>
</tr>
<tr>
<td>Strong Reliability</td>
<td>20</td>
</tr>
<tr>
<td>Medium Reliability</td>
<td>12</td>
</tr>
<tr>
<td>Weak Reliability</td>
<td>3</td>
</tr>
<tr>
<td>Operational Nursing Competencies (n =11 items)</td>
<td></td>
</tr>
<tr>
<td>Strong Reliability</td>
<td>8</td>
</tr>
<tr>
<td>Medium Reliability</td>
<td>3</td>
</tr>
<tr>
<td>Weak Reliability</td>
<td>0</td>
</tr>
<tr>
<td>Soldier Survival Skills (n =11 items)</td>
<td></td>
</tr>
<tr>
<td>Strong Reliability</td>
<td>6</td>
</tr>
<tr>
<td>Medium Reliability</td>
<td>3</td>
</tr>
<tr>
<td>Weak Reliability</td>
<td>2</td>
</tr>
<tr>
<td>Survey Subset</td>
<td>Number of Items</td>
</tr>
<tr>
<td>---------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Personal and Physical Readiness (n = 5 items)</td>
<td></td>
</tr>
<tr>
<td>Strong Reliability</td>
<td>5</td>
</tr>
<tr>
<td>Medium Reliability</td>
<td>0</td>
</tr>
<tr>
<td>Weak Reliability</td>
<td>0</td>
</tr>
<tr>
<td>Psychosocial Readiness (n = 22 items)</td>
<td></td>
</tr>
<tr>
<td>Strong Reliability</td>
<td>10</td>
</tr>
<tr>
<td>Medium Reliability</td>
<td>4</td>
</tr>
<tr>
<td>Weak Reliability</td>
<td>8</td>
</tr>
<tr>
<td>Leadership &amp; Administration Support (n = 5 items)</td>
<td></td>
</tr>
<tr>
<td>Strong Reliability</td>
<td>2</td>
</tr>
<tr>
<td>Medium Reliability</td>
<td>2</td>
</tr>
<tr>
<td>Weak Reliability</td>
<td>1</td>
</tr>
<tr>
<td>Group Integration &amp; Identification (n = 4 items)</td>
<td></td>
</tr>
<tr>
<td>Strong Reliability</td>
<td>1</td>
</tr>
<tr>
<td>Medium Reliability</td>
<td>1</td>
</tr>
<tr>
<td>Weak Reliability</td>
<td>2</td>
</tr>
</tbody>
</table>
A summary of the reliability analysis is provided in Table 3. The Leadership & Administrative Support scale is very short containing only five items. The small sample may account for the low .24 reliability coefficient.

The paper-pencil version of the Readiness Estimate and Deployability Index (READI) is a 105 item survey tool which measures self-report of cognition, affect, perception of psychomotor skills, and physical ability related to the six areas of nursing readiness. The paper-pencil version of the READI was a result of a three-phase research project to improve nursing readiness assessment. In Phase I, expert panel members met and identified six areas of nursing deployment readiness: 1) Clinical Nursing Competency, 2) Operational Nursing Competency, 3) Soldier/Survival Skills, 4) Personal/Psychosocial/Physical Readiness, 5) Leadership and Administrative Support, and 6) Group Integration and Identification. Subject matter experts in each of the identified areas developed questions for the initial READI survey. Validity for the items was estimated by content validity testing technique utilizing eight content experts. The experts rated each individual item on a scale of 1 (low) to 4 (high). The mean ratings were 3.6 for clarity, 3.6 for relevance, and 3.6 for uniqueness. Changes to the questions were made based on the recommendation of the subject matter experts and incorporated into the initial version of the READI. (Reineck, Finstuen, Connelly, & Murdock, 2001).

With Phase II, the READI was again refined based on results of internal consistency and test-retest reliabilities from a pilot test of a sample of 31 Army
nurses. In Phase III the tool was again tested by administration to three separate groups of Army nurses (n=27, n=34, n=32). The READI is a valid and reliable tool to be utilized in a military population (Reineck et al, 2001). This study took the paper-pencil version and converted it to an electronic version with the permission of COL Reineck. The only changes made to the electronic version of the READI were demographics adapted to fit the sample group. Even though the sample size was small, the two tools were deemed to be comparable.

Table 3

<table>
<thead>
<tr>
<th>Questionnaire Section</th>
<th>r</th>
<th>Questionnaire Section</th>
<th>r</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pencil – Paper Version</td>
<td></td>
</tr>
<tr>
<td>Electronic Version</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clinical Nursing Comp.</td>
<td>.93</td>
<td>.71</td>
<td></td>
</tr>
<tr>
<td>Operational Nursing Comp.</td>
<td>.67</td>
<td>.67</td>
<td></td>
</tr>
<tr>
<td>Soldier Survival Skills</td>
<td>.63</td>
<td>.83</td>
<td></td>
</tr>
<tr>
<td>Personal &amp; Physical Readiness</td>
<td>1.00</td>
<td>.78</td>
<td></td>
</tr>
<tr>
<td>Leadership &amp; Admin. Support</td>
<td>.24</td>
<td>.69</td>
<td></td>
</tr>
<tr>
<td>Group Integration &amp; Id.</td>
<td>.67</td>
<td>.68</td>
<td></td>
</tr>
</tbody>
</table>

Based on the comparability identified by the pilot study, no changes to the survey instrument were recommended. The major study commenced following the pilot study at the two military treatment facilities (MTF) previously mentioned.
Description of the Major Research Sample

One hundred thirty-one participants of 338 eligible to participate in the research, responded to the survey within the 60 day period resulting in an overall return rate of 39%. Twenty-nine out of possible 44 participants completed the survey from Darnall Army Community Hospital (DACH) resulting in a site return rate of 66%. One hundred two out of 294 possible participants completed the survey from William Beaumont Army Medical Center (WBAMC) resulting in a site return rate of 35%.

Ninety-one surveys (27%) were completed within the first 30 days and the remaining 40 (12%) returned within 60 days. Frequency distributions were utilized to describe the demographic data. Frequency is “the number of times a given observation appears in a data set” (Biles, 1995, p. 10).

Normally, nurses entering the military as an officer will be brought into the Army Nurse Corps as a Medical Surgical Nurse (66H00). After serving on active duty for an average period of two or more years, the officer may then apply to an area of concentration course. After successful completion of the course, the individual’s AOC changes to indicate their specialty. Three AOC’s presently require graduate studies. These are Nurse Midwife, Nurse Practitioner and Nurse Anesthetist. Enlisted soldiers may also change their MOS at the time of reenlistment or by applying to specific military courses. Demographic data of the research respondents relating to Area of Concentration/Military Occupational Specialty (AOC/MOS) are depicted in Table 4.
Table 4

*Area of Concentration/Military Occupational Specialty*

<table>
<thead>
<tr>
<th>AOC/MOS</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>66C - Psychiatric Nurse</td>
<td>2</td>
<td>2.0</td>
</tr>
<tr>
<td>66E - Perioperative Nurse</td>
<td>11</td>
<td>8.0</td>
</tr>
<tr>
<td>66F - Nurse Anesthetist</td>
<td>9</td>
<td>7.0</td>
</tr>
<tr>
<td>66H00 - Medical Surgical Nurse</td>
<td>36</td>
<td>27.0</td>
</tr>
<tr>
<td>66H8A - Critical Care Nurse</td>
<td>9</td>
<td>7.0</td>
</tr>
<tr>
<td>66H8E - Nurse Practitioner</td>
<td>5</td>
<td>4.0</td>
</tr>
<tr>
<td>66H8F - Community Health Nurse</td>
<td>7</td>
<td>5.0</td>
</tr>
<tr>
<td>66HM5 - Emergency Nurse</td>
<td>1</td>
<td>1.0</td>
</tr>
<tr>
<td>91B/91W - Medical Specialist</td>
<td>5</td>
<td>4.0</td>
</tr>
<tr>
<td>91C/91M6 - Licensed Practical Nurse</td>
<td>14</td>
<td>10.0</td>
</tr>
<tr>
<td>91D - Surgical Technician</td>
<td>15</td>
<td>11.0</td>
</tr>
<tr>
<td>91X - Behavioral Health Technician</td>
<td>6</td>
<td>5.0</td>
</tr>
<tr>
<td>Other</td>
<td>12</td>
<td>9.0</td>
</tr>
</tbody>
</table>

Length of time in AOC/MOS, level of education and age were collapsed into three groups due to sample size and to enhance graphic presentation. In order to enter as an officer in the nursing field, the individual must have as a minimum a Bachelor of Science Degree in Nursing and successfully sit the NCLEX-RN registered nurse examination and maintain licensure. Presently,
enlisted soldiers entering the military are required to have a high school diploma. The enlisted soldiers are encouraged throughout their military career to advance their level of education, but are not required to hold a degree. However, 91M6 (Licensed Practical Nurses) are required to have successfully completed the NCLEX-PN examination for licensed practical nurses and must maintain their licensure. The groups in the sample are fairly equal in size and length of time in AOC/MOS. It is noted there is a fairly large number of officers with a master in nursing. This is not an unusual phenomenon as officers are encouraged to obtain a master degree between the ranks of captain and major as it is a requirement for promotion to the rank of lieutenant colonel. Twenty – one of the enlisted soldiers reported completion of degrees as follows: associate degree in nursing – 2; associate degree outside of nursing – 10; bachelor degree outside of nursing – 8; and master degree outside of nursing - 1. The descriptions of these demographics are illustrated in Table 5. Frequencies relating to rank, gender and any previous deployment in AOC/MOS are shown in Table 6.
Table 5

*Length of Time in AOC/MOS, Level of Education and Age*

<table>
<thead>
<tr>
<th>Variable (n=131)</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Length of Time</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; 4 years</td>
<td>52</td>
<td>39.7</td>
</tr>
<tr>
<td>4-7 years</td>
<td>34</td>
<td>26.0</td>
</tr>
<tr>
<td>8 years +</td>
<td>45</td>
<td>34.4</td>
</tr>
<tr>
<td><strong>Level of Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&lt; BS</td>
<td>44</td>
<td>33.6</td>
</tr>
<tr>
<td>BSN</td>
<td>59</td>
<td>45.0</td>
</tr>
<tr>
<td>MS +</td>
<td>28</td>
<td>21.4</td>
</tr>
<tr>
<td><strong>Age</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>19 - 30</td>
<td>63</td>
<td>48.1</td>
</tr>
<tr>
<td>31 - 40</td>
<td>43</td>
<td>32.8</td>
</tr>
<tr>
<td>40 +</td>
<td>25</td>
<td>19.1</td>
</tr>
</tbody>
</table>
Table 6

*Rank, Gender, Deployed in AOC/MOS*

<table>
<thead>
<tr>
<th>Variable (n=131)</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Rank</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enlisted</td>
<td>52</td>
<td>40.0</td>
</tr>
<tr>
<td>Officer</td>
<td>79</td>
<td>60.0</td>
</tr>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>57</td>
<td>44.0</td>
</tr>
<tr>
<td>Male</td>
<td>74</td>
<td>56.0</td>
</tr>
<tr>
<td><strong>Previous</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deployment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>30</td>
<td>23.0</td>
</tr>
<tr>
<td>No</td>
<td>101</td>
<td>77.0</td>
</tr>
</tbody>
</table>

Twenty-four out 79 officers (30%) reported prior enlisted time. The number of years of previous enlisted time ranged from 3 years to 15 years with an average of 7 years. Numerous diverse military occupational specialties were identified with the prior service. However, the 91C/91M6 (LPN) appeared more often than the other MOS’s. Thirty-three research participants indicated they had civilian nursing experience prior to entering the military. The more commonly
mentioned fields were Med/Surg, Cardiac, Critical Care and Emergency/Trauma Nursing. The average number of years of civilian experience was 5.5 years. Twelve of the 131 participants indicated they had not completed any annual readiness training with a combat support unit. Therefore, these individuals had not met annual readiness requirements for their PROFIS status and possible deployment. Of those completing annual training, the most frequently reported number of days of readiness training was five. To maintain PROFIS status, an individual must complete five days of annual training, perform common task training annually, and qualify with a weapon every three years. Regrettably, the PROFIS personnel may not be able to complete five days of training consecutively. Due to mission constraints, the individuals training may be broken into single days over a period of several months to meet annual requirements. Also, PROFIS personnel may not be able to train with their assigned PROFIS unit. Two occurrences may generate this complexity: (1) A shortage of training opportunities; (2) their assigned PROFIS unit is located away from their military installation. Not training with their assigned unit may cause increased stress during deployments relating to unfamiliarity with unit’s personnel, mission goals or assigned duty position.

Research Questions

The first research question asked was “Are there differences in perceived competency skills required for deployment in the combat support arena among PROFIS personnel assigned to the fixed facility? The means and standard
deviation were calculated from responses to a five-point rating scale to answer the research question. The numbers of items vary by topic and section. The one-way analysis of variance (ANOVA) was employed to test for statistical significance. The ANOVA is a statistical test which compares the means of several groups at one time to test for significant (Polit & Hungler, 1995). The data was statistically analyzed at a confidence interval of 95%.

The Readiness Estimate and Deployability Index (READI) encompasses several subsets relating to competency, soldier skills, physical/personal readiness, psychosocial readiness, leadership and group integration. The numbers of items vary by topic and section. For clarity, the data analysis will be presented in the same format as the tool. As this research study surveyed both enlisted and officer PROFIS personnel, the data is presented in group format as 66XXX (RN), 91C/91M6 (LPN) and a third group composed of 91D (surgical tech), 91X (psych tech) and other MOS’s. The 91B/91W (CNA) group only had five individuals complete the survey. Therefore, the results of this group may not be a fair representation of their skill level and will not be displayed on the panoramic graphs but are included in the figure tables and ANOVA’s for review.

The READI used a five point scale of “Not Competent” (1), “Slightly Competent” (2), “Somewhat Competent” (3), “Competent” (4) and “Totally Competent” (5). After review of the data analysis, this researcher felt the results of the research could be more clearly displayed if the five point scale was collapsed into three categories of “Not Competent”, “Moderately Competent” and
“Totally Competent.” The panoramic graphs display the categories of “Not Competent” (1-2), “Moderately Competent” (3-4) and “Totally Competent” (5). Question 15 in the subset of psychosocial readiness allowed for multiple answers and will be presented in a separate table. (See Figures 3-12 and Tables 7-17).
Section One: Clinical Nursing Competency

![Diagram showing comparison of clinical nursing competency across different categories]

<table>
<thead>
<tr>
<th>Item</th>
<th>66XXX (n=79)</th>
<th>91C/91M6 (n=14)</th>
<th>91B/91W (n=5)</th>
<th>All Others (n=33)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - Different types of shock</td>
<td>2.85, 0.988</td>
<td>3.21, 0.802</td>
<td>4.6, 0.548</td>
<td>2.55, 1.121</td>
</tr>
<tr>
<td>2 - Caring for hemorrhagic shock</td>
<td>2.91, 1.221</td>
<td>2.64, 0.842</td>
<td>4.6, 0.548</td>
<td>1.97, 1.075</td>
</tr>
<tr>
<td>3 - Correct response to shock scenario</td>
<td>1.99, 0.196</td>
<td>2.0, 0.0</td>
<td>2.0, 0.0</td>
<td>1.82, 0.392</td>
</tr>
<tr>
<td>4 - Documenting in field environment</td>
<td>2.94, 0.979</td>
<td>2.43, 1.222</td>
<td>3.8, 1.643</td>
<td>2.18, 1.158</td>
</tr>
<tr>
<td>5 - Last time provided direct patient care</td>
<td>3.68, 0.743</td>
<td>3.36, 1.151</td>
<td>3.4, 1.342</td>
<td>3.21, 1.269</td>
</tr>
<tr>
<td>6 - Types of triage experience</td>
<td>3.28, 1.502</td>
<td>4.0, 1.519</td>
<td>4.6, 0.548</td>
<td>2.64, 1.388</td>
</tr>
<tr>
<td>7 - IV drip calculations</td>
<td>3.41, 1.401</td>
<td>2.43, 1.399</td>
<td>4.8, 0.447</td>
<td>2.24, 1.659</td>
</tr>
<tr>
<td>8 - Last time reconstituted, calculated, admin IV meds</td>
<td>2.65, 1.241</td>
<td>2.36, 1.393</td>
<td>3.4, 1.342</td>
<td>1.91, 1.259</td>
</tr>
<tr>
<td>9 - Instituting standing orders</td>
<td>3.48, 1.239</td>
<td>3.29, 1.49</td>
<td>5.0, 0.0</td>
<td>2.27, 1.398</td>
</tr>
<tr>
<td>10 - Code/emergency situation</td>
<td>2.18, 0.594</td>
<td>2.0, 0.877</td>
<td>2.8, 0.447</td>
<td>1.73, 0.719</td>
</tr>
<tr>
<td>11 - Calculating body surface area burn patient</td>
<td>3.56, 1.01</td>
<td>3.57, 1.505</td>
<td>4.8, 0.447</td>
<td>2.48, 1.278</td>
</tr>
<tr>
<td>12 - Deciding which patient is seen first</td>
<td>3.16, 1.137</td>
<td>3.5, 1.506</td>
<td>4.8, 0.447</td>
<td>2.55, 1.252</td>
</tr>
</tbody>
</table>

Figure 3. Panoramic display depicting READI profiles and a statistical comparison of active duty nurses, 91M6, 91W and all other MOS's for self-reported clinical nursing competency.
Table 7

*Analysis of Variance for Clinical Nursing Competency between AOC/MOS*

<table>
<thead>
<tr>
<th>Source</th>
<th>F</th>
<th>P</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competency 1</td>
<td>6.768</td>
<td>0</td>
</tr>
<tr>
<td>Competency 2</td>
<td>10.137</td>
<td>0</td>
</tr>
<tr>
<td>Competency 3</td>
<td>3.911</td>
<td>0.01*</td>
</tr>
<tr>
<td>Competency 4</td>
<td>5.809</td>
<td>0.001**</td>
</tr>
<tr>
<td>Competency 5</td>
<td>2.022</td>
<td>0.114</td>
</tr>
<tr>
<td>Competency 6</td>
<td>4.643</td>
<td>0.004**</td>
</tr>
<tr>
<td>Competency 7</td>
<td>8.264</td>
<td>0</td>
</tr>
<tr>
<td>Competency 8</td>
<td>3.604</td>
<td>0.015*</td>
</tr>
<tr>
<td>Competency 9</td>
<td>10.204</td>
<td>0</td>
</tr>
<tr>
<td>Competency 10</td>
<td>5.8</td>
<td>0.001**</td>
</tr>
<tr>
<td>Competency 11</td>
<td>10.261</td>
<td>0</td>
</tr>
<tr>
<td>Competency 12</td>
<td>6.341</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: For all comparisons in this table, the df for the between groups is 3 and the within groups is 127 for a total of 130. * p < .05. ** p < .01.

Significant differences are noted between the groups in evacuating a patient due to potential hypovolemic shock, clinical documentation in a field environment, triage experience, reconstitution of medication, and performance in a code/emergency situation.
### Section One: Clinical Nursing Competency

#### Figure 4.
Panoramic display depicting READI profiles and a statistical comparison of active duty nurses, 91M6, 91W and all other MOS's for self-reported clinical nursing competency.

<table>
<thead>
<tr>
<th>Item</th>
<th>66XXX (n=79)</th>
<th>91C/91M6 (n=14)</th>
<th>91B/91W (n=5)</th>
<th>All Others (n=33)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - Performing ACLS protocols</td>
<td>2.72 1.484</td>
<td>2.07 1.328</td>
<td>4.4 0.894</td>
<td>1.88 1.93</td>
</tr>
<tr>
<td>2 - Caring for life-threatening injuries</td>
<td>2.92 1.13</td>
<td>3.36 1.447</td>
<td>4.6 0.894</td>
<td>2.18 1.31</td>
</tr>
<tr>
<td>3 - IV skills</td>
<td>1.05 0.221</td>
<td>1.0 0.0</td>
<td>1.0 0.0</td>
<td>1.39 0.496</td>
</tr>
<tr>
<td>4 - Describing life-saving principals</td>
<td>1.01 0.113</td>
<td>1.0 0.0</td>
<td>1.0 0.0</td>
<td>1.03 0.174</td>
</tr>
<tr>
<td>5 - Assessing multiple trauma patient</td>
<td>1.25 0.438</td>
<td>1.0 0.0</td>
<td>1.0 0.0</td>
<td>1.48 0.508</td>
</tr>
<tr>
<td>6 - Care of NBC patient</td>
<td>2.13 0.972</td>
<td>2.71 1.437</td>
<td>3.4 0.894</td>
<td>1.82 0.983</td>
</tr>
<tr>
<td>7 - Care of Ballistic missile injuries</td>
<td>2.11 1.24</td>
<td>2.5 1.605</td>
<td>4.0 1.414</td>
<td>2.7 0.984</td>
</tr>
<tr>
<td>8 - Recognizing tension pneumothorax</td>
<td>2.58 1.317</td>
<td>2.29 1.204</td>
<td>4.6 0.894</td>
<td>1.97 1.075</td>
</tr>
<tr>
<td>9 - Fluid replacement for burn patients</td>
<td>2.47 1.228</td>
<td>2.79 1.528</td>
<td>4.4 0.894</td>
<td>1.61 1.059</td>
</tr>
<tr>
<td>10 - Universal blood donor protocol</td>
<td>2.59 1.345</td>
<td>2.29 1.59</td>
<td>4.8 0.447</td>
<td>2.12 1.364</td>
</tr>
<tr>
<td>11 - Disease, non-battle injuries</td>
<td>2.91 1.303</td>
<td>2.64 1.336</td>
<td>4.4 0.894</td>
<td>1.03 1.185</td>
</tr>
<tr>
<td>12 - Use of field ventilator</td>
<td>2.03 1.206</td>
<td>2.29 1.49</td>
<td>3.2 1.643</td>
<td>1.58 1.062</td>
</tr>
</tbody>
</table>
Table 8

*Analysis of Variance for Clinical Nursing Competency between AOC/MOS*

<table>
<thead>
<tr>
<th>Source</th>
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<th>p</th>
</tr>
</thead>
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<tr>
<td>Competency 1</td>
<td>6.472</td>
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</tr>
<tr>
<td>Competency 2</td>
<td>7.804</td>
<td>0</td>
</tr>
<tr>
<td>Competency 3</td>
<td>11.303</td>
<td>0</td>
</tr>
<tr>
<td>Competency 4</td>
<td>0.269</td>
<td>0.848</td>
</tr>
<tr>
<td>Competency 5</td>
<td>5.347</td>
<td>0.002**</td>
</tr>
<tr>
<td>Competency 6</td>
<td>5.003</td>
<td>0.003**</td>
</tr>
<tr>
<td>Competency 7</td>
<td>5.632</td>
<td>0.001**</td>
</tr>
<tr>
<td>Competency 8</td>
<td>7.064</td>
<td>0</td>
</tr>
<tr>
<td>Competency 9</td>
<td>9.736</td>
<td>0</td>
</tr>
<tr>
<td>Competency 10</td>
<td>5.865</td>
<td>0.001**</td>
</tr>
<tr>
<td>Competency 11</td>
<td>6.811</td>
<td>0</td>
</tr>
<tr>
<td>Competency 12</td>
<td>3.201</td>
<td>0.026*</td>
</tr>
</tbody>
</table>

Note: For all comparisons in this table, the df for the between groups is 3 and the within groups is 127 for a total of 130. * p< .05. ** p< .01.

Significant differences are noted between groups in confidence assessing a multiple trauma patient, care of patients with NBC injuries, care of ballistic missile injuries, universal blood donor protocol and use of the field ventilator.
Section One: Clinical Nursing Competence

![Graph]

**Figure 5.** Panoramic display depicting READI profiles and a statistical comparison of active duty nurses, 91M6, 91W and all other MOS’s for self-reported clinical nursing competency.
Table 9

*Analysis of Variance for Clinical Nursing Competency between AOC/MOS*

<table>
<thead>
<tr>
<th>Source</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competency 1</td>
<td>3.185</td>
<td>0.026*</td>
</tr>
<tr>
<td>Competency 2</td>
<td>7.814</td>
<td>0</td>
</tr>
<tr>
<td>Competency 3</td>
<td>8.328</td>
<td>0</td>
</tr>
<tr>
<td>Competency 4</td>
<td>2.929</td>
<td>0.036*</td>
</tr>
<tr>
<td>Competency 5</td>
<td>10.16</td>
<td>0</td>
</tr>
<tr>
<td>Competency 6</td>
<td>3.05</td>
<td>0.031*</td>
</tr>
<tr>
<td>Competency 7</td>
<td>10.71</td>
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</tr>
<tr>
<td>Competency 8</td>
<td>12.267</td>
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</tr>
<tr>
<td>Competency 9</td>
<td>11.117</td>
<td>0</td>
</tr>
<tr>
<td>Competency 10</td>
<td>8.557</td>
<td>0</td>
</tr>
<tr>
<td>Competency 11</td>
<td>12.502</td>
<td>0</td>
</tr>
</tbody>
</table>

Note: For all comparisons in this table, the df for the between groups is 3 and the within groups is 127 for a total of 130. * p < .05.

Significant differences are noted between the groups in airway management, caring for refugees, and field infection control.
Section Two: Operational Nursing Competence

<table>
<thead>
<tr>
<th>Item</th>
<th>66XXX (n=79)</th>
<th>91C/91M6 (n=14)</th>
<th>91B/91W (n=5)</th>
<th>All Others (n=33)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Obtaining 12-lead EKG by scenario</td>
<td>2.27 (1.38)</td>
<td>1.79 (1.47)</td>
<td>3.6 (1.67)</td>
<td>2.00 (1.50)</td>
</tr>
<tr>
<td>2. Working with suction apparatus</td>
<td>1.35 (0.77)</td>
<td>1.57 (1.0)</td>
<td>2.6 (1.8)</td>
<td>1.52 (0.90)</td>
</tr>
<tr>
<td>3. Knowledge of recharge time for battery pack</td>
<td>1.25 (0.76)</td>
<td>1.43 (0.94)</td>
<td>1.4 (0.55)</td>
<td>1.88 (1.36)</td>
</tr>
<tr>
<td>4. Answer for suction power in field hospital</td>
<td>1.09 (0.28)</td>
<td>1.07 (0.27)</td>
<td>1.2 (0.45)</td>
<td>1.09 (0.29)</td>
</tr>
<tr>
<td>5. Answer for power in evacuation vehicles</td>
<td>1.03 (0.16)</td>
<td>1.00 (0.00)</td>
<td>1.2 (0.45)</td>
<td>1.09 (0.29)</td>
</tr>
<tr>
<td>6. Answers for power for patient on litter</td>
<td>1.11 (0.32)</td>
<td>1.36 (0.49)</td>
<td>1.4 (0.55)</td>
<td>1.06 (0.24)</td>
</tr>
<tr>
<td>7. Evacuation procedures</td>
<td>2.59 (0.88)</td>
<td>3.36 (1.49)</td>
<td>3.8 (0.83)</td>
<td>2.42 (1.17)</td>
</tr>
<tr>
<td>8. Echelon of care</td>
<td>2.63 (0.95)</td>
<td>2.93 (1.64)</td>
<td>4.2 (1.30)</td>
<td>2.33 (1.13)</td>
</tr>
<tr>
<td>9. Reporting unlawful act or conduct</td>
<td>2.41 (0.96)</td>
<td>3.00 (1.61)</td>
<td>3.8 (1.30)</td>
<td>2.48 (1.23)</td>
</tr>
<tr>
<td>10. Field sanitation and hygiene</td>
<td>3.22 (0.98)</td>
<td>3.43 (1.55)</td>
<td>3.8 (0.45)</td>
<td>3.09 (1.44)</td>
</tr>
<tr>
<td>11. DEPMEDS setup</td>
<td>3.28 (1.06)</td>
<td>2.14 (1.40)</td>
<td>3.4 (1.14)</td>
<td>2.91 (1.40)</td>
</tr>
</tbody>
</table>

*Figure 6.* Panoramic display depicting READI profiles and a statistical comparison of active duty nurses, 91M6, 91W and all other MOS’s for self-reported operational nursing competency.
Table 10

*Analysis of Variance for Operational Nursing Competency between AOC/MOS*

<table>
<thead>
<tr>
<th>Source</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Competency 1</td>
<td>2.249</td>
<td>0.086</td>
</tr>
<tr>
<td>Competency 2</td>
<td>3.272</td>
<td>0.023*</td>
</tr>
<tr>
<td>Competency 3</td>
<td>3.297</td>
<td>0.023*</td>
</tr>
<tr>
<td>Competency 4</td>
<td>0.255</td>
<td>0.858</td>
</tr>
<tr>
<td>Competency 5</td>
<td>1.921</td>
<td>0.129</td>
</tr>
<tr>
<td>Competency 6</td>
<td>3.735</td>
<td>0.013*</td>
</tr>
<tr>
<td>Competency 7</td>
<td>4.761</td>
<td>0.004**</td>
</tr>
<tr>
<td>Competency 8</td>
<td>4.534</td>
<td>0.005**</td>
</tr>
<tr>
<td>Competency 9</td>
<td>3.249</td>
<td>0.024*</td>
</tr>
<tr>
<td>Competency 10</td>
<td>0.688</td>
<td>0.561</td>
</tr>
<tr>
<td>Competency 11</td>
<td>3.934</td>
<td>0.01*</td>
</tr>
</tbody>
</table>

Note: For all comparisons in this table, the df for the between groups is 3 and the within groups is 127 for a total of 130. * p< .05. ** p< .01.

Significant differences are noted between groups in knowledge of operation time of the internal battery of the suction machine, recharge time for internal battery of suction machine, type of power need for suction equipment for a liter patient, evacuation procedures, echelon of care, reporting unlawful act or conduct, and DEPMEDS setup.
Section Three: Soldier and Survival Skills

![Graph showing competence levels]

### Item

#### Section Three: Soldier and Survival Skills (k=11 items)

<table>
<thead>
<tr>
<th>Competence in:</th>
<th>66XXX (n=79)</th>
<th>91C/91M6 (n=14)</th>
<th>91B/91W (n=5)</th>
<th>All Others (n=33)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Familiarity with the M-16 rifle</td>
<td>2.94 1.017</td>
<td>3.71 1.59</td>
<td>4.2 1.304</td>
<td>4.58 0.561</td>
</tr>
<tr>
<td>2 - Familiarity with the 9mm pistol</td>
<td>3.01 0.954</td>
<td>3.14 1.748</td>
<td>4.2 1.304</td>
<td>2.39 1.273</td>
</tr>
<tr>
<td>3- Ability to defend self and patients</td>
<td>3.04 1.16</td>
<td>3.36 1.823</td>
<td>3.8 1.643</td>
<td>3.82 1.357</td>
</tr>
<tr>
<td>4 - Protection of self with mask/MOPP gear</td>
<td>3.29 1.189</td>
<td>3.57 1.555</td>
<td>4.4 0.894</td>
<td>3.97 .0883</td>
</tr>
<tr>
<td>5 - Navigation with map and compass</td>
<td>3.43 0.929</td>
<td>3.36 1.646</td>
<td>4.2 1.789</td>
<td>3.91 1.234</td>
</tr>
<tr>
<td>6 - Maintaining weapon in working order</td>
<td>3.20 1.181</td>
<td>3.93 1.685</td>
<td>4.4 1.342</td>
<td>4.30 1.045</td>
</tr>
<tr>
<td>7 - Performing in adverse conditions</td>
<td>3.32 1.236</td>
<td>3.79 1.626</td>
<td>4.2 1.304</td>
<td>3.91 1.128</td>
</tr>
<tr>
<td>8 - Decontaminating self/ patient using decontamination equipment</td>
<td>2.52 1.011</td>
<td>3.36 1.692</td>
<td>3.8 1.095</td>
<td>3.42 1.30</td>
</tr>
<tr>
<td>9 - Familiarity with status under Geneva Convention</td>
<td>2.61 1.192</td>
<td>3.07 1.774</td>
<td>3.6 1.517</td>
<td>3.00 1.323</td>
</tr>
<tr>
<td>10 - Ability to resist enemy if captured</td>
<td>2.25 1.138</td>
<td>3.00 1.754</td>
<td>3.8 1.643</td>
<td>2.88 1.364</td>
</tr>
<tr>
<td>11- Familiarity with Army communication equipment</td>
<td>2.63 0.976</td>
<td>3.36 1.646</td>
<td>3.4 1.14</td>
<td>3.18 1.103</td>
</tr>
</tbody>
</table>

*Figure 7. Panoramic display depicting READI profiles and a statistical comparison of active duty nurses, 91M6, 91W and all other MOS's for self-reported soldier and survival skills.*
### Table 11

**Analysis of Variance for Soldier Survival Skills between AOC/MOS**

<table>
<thead>
<tr>
<th>Source</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Skill 1</td>
<td>21.524</td>
<td>0</td>
</tr>
<tr>
<td>Skill 2</td>
<td>4.673</td>
<td>0.004**</td>
</tr>
<tr>
<td>Skill 3</td>
<td>3.028</td>
<td>0.032*</td>
</tr>
<tr>
<td>Skill 4</td>
<td>3.661</td>
<td>0.014*</td>
</tr>
<tr>
<td>Skill 5</td>
<td>2.051</td>
<td>0.11</td>
</tr>
<tr>
<td>Skill 6</td>
<td>7.549</td>
<td>0</td>
</tr>
<tr>
<td>Skill 7</td>
<td>2.313</td>
<td>0.07</td>
</tr>
<tr>
<td>Skill 8</td>
<td>6.619</td>
<td>0</td>
</tr>
<tr>
<td>Skill 9</td>
<td>1.653</td>
<td>0.181</td>
</tr>
<tr>
<td>Skill 10</td>
<td>4.243</td>
<td>0.007**</td>
</tr>
<tr>
<td>Skill 11</td>
<td>3.407</td>
<td>0.02*</td>
</tr>
</tbody>
</table>

Note: For all comparisons in this table, the df for the between groups is 3 and the within groups is 127 for a total of 130. * p< .05. ** p< .01.

Significant differences are noted between groups in familiarization of 9mm pistol, ability to defend oneself and patient, ability to use M40 gas mask and MOPP gear, ability to resist the enemy if captured, and familiarization with Army communication equipment.
Section Four: Personal and Physical Readiness

<table>
<thead>
<tr>
<th>Item</th>
<th>66XXX (n=79)</th>
<th>91C/91M6 (n=14)</th>
<th>91B/91W (n=5)</th>
<th>All Others (n=33)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Last APFT score</td>
<td>3.42 (0.982)</td>
<td>2.86 (1.027)</td>
<td>3.6 (1.342)</td>
<td>3.79 (1.111)</td>
</tr>
<tr>
<td>2 - How long since last dental exam</td>
<td>4.27 (0.943)</td>
<td>3.57 (1.651)</td>
<td>4.8 (0.447)</td>
<td>4.58 (0.902)</td>
</tr>
<tr>
<td>3 - Has family care plan if indicated</td>
<td>2.57 (0.796)</td>
<td>2.36 (0.929)</td>
<td>2.2 (1.095)</td>
<td>2.18 (0.983)</td>
</tr>
<tr>
<td>4 - Have a physical profile or not</td>
<td>1.80 (0.404)</td>
<td>1.64 (0.497)</td>
<td>2.0 (0)</td>
<td>1.85 (0.364)</td>
</tr>
<tr>
<td>5 - Profile prevents deployment</td>
<td>2.43 (0.779)</td>
<td>2.07 (0.917)</td>
<td>2.6 (0.894)</td>
<td>2.42 (0.83)</td>
</tr>
</tbody>
</table>

*Figure 8.* Panoramic display depicting READI profiles and a statistical comparison of active duty nurses, 91M6, 91W and all other MOS’s for self-reported personal and physical readiness.
Table 12

*Analysis of Variance for Personal and Physical Readiness between AOC/MOS*

<table>
<thead>
<tr>
<th>Source</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Readiness 1</td>
<td>2.77</td>
<td>0.44*</td>
</tr>
<tr>
<td>Readiness 2</td>
<td>3.622</td>
<td>0.015*</td>
</tr>
<tr>
<td>Readiness 3</td>
<td>1.718</td>
<td>0.167</td>
</tr>
<tr>
<td>Readiness 4</td>
<td>1.306</td>
<td>0.276</td>
</tr>
<tr>
<td>Readiness 5</td>
<td>0.913</td>
<td>0.437</td>
</tr>
</tbody>
</table>

Note: For all comparisons in this table, the df for the between groups is 3 and the within groups is 127 for a total of 130. * p< .05.

Significant differences are noted between groups in Army physical fitness test scores and time since last dental exam.
Section Five: Psychosocial Readiness

<table>
<thead>
<tr>
<th>Competence in:</th>
<th>66XXX (n=79)</th>
<th>91C/91M6 (n=14)</th>
<th>91B/91W (n=5)</th>
<th>All Others (n=33)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean S.D.</td>
<td>Mean S.D.</td>
<td>Mean S.D.</td>
<td>Mean S.D.</td>
<td>Mean S.D.</td>
</tr>
<tr>
<td>1- Quality of current family support system</td>
<td>3.06 1.102</td>
<td>3.21 1.528</td>
<td>4.0 0.707</td>
<td>3.39 1.144</td>
</tr>
<tr>
<td>2 - Same support system available if deployed</td>
<td>1.0 0.0</td>
<td>1.07 0.267</td>
<td>1.0 0.0</td>
<td>1.0 0.0</td>
</tr>
<tr>
<td>3 - Separation more than 6 months from family</td>
<td>1.7 0.463</td>
<td>1.36 0.497</td>
<td>1.4 0.548</td>
<td>1.33 0.479</td>
</tr>
<tr>
<td>4 - Family’s response to separation</td>
<td>4.61 1.829</td>
<td>3.86 1.875</td>
<td>3.2 1.924</td>
<td>3.76 1.733</td>
</tr>
<tr>
<td>5 - Having a current will</td>
<td>1.13 0.335</td>
<td>1.21 0.426</td>
<td>1.2 0.447</td>
<td>1.15 0.364</td>
</tr>
<tr>
<td>6 - Having a current power of attorney</td>
<td>1.13 0.335</td>
<td>1.21 0.426</td>
<td>1.2 0.447</td>
<td>1.30 0.467</td>
</tr>
<tr>
<td>7 - Any pending legal matters</td>
<td>1.96 0.192</td>
<td>1.79 0.426</td>
<td>1.8 0.447</td>
<td>1.97 0.174</td>
</tr>
<tr>
<td>8 - Current working relationship co-workers in deployment unit</td>
<td>3.52 1.306</td>
<td>2.57 1.089</td>
<td>4.8 0.837</td>
<td>3.36 1.432</td>
</tr>
<tr>
<td>9 - Overall feeling of last deployment</td>
<td>5.19 1.451</td>
<td>3.36 1.946</td>
<td>5.2 1.304</td>
<td>5.03 1.447</td>
</tr>
<tr>
<td>10 - Amount of current stress at work</td>
<td>2.46 1.06</td>
<td>2.29 1.069</td>
<td>2.0 0.707</td>
<td>2.30 0.847</td>
</tr>
<tr>
<td>11- Amount of current stress in family</td>
<td>1.87 0.931</td>
<td>1.86 1.167</td>
<td>1.4 0.548</td>
<td>1.97 0.81</td>
</tr>
</tbody>
</table>

Figure 9. Panoramic display depicting READI profiles and a statistical comparison of active duty nurses, 91M6, 91W and all other MOS’s for self-reported psychosocial readiness.
Table 13

*Analysis of Variance for Psychosocial Readiness between AOC/MOS*

<table>
<thead>
<tr>
<th>Source</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Readiness 1</td>
<td>1.484</td>
<td>0.222</td>
</tr>
<tr>
<td>Readiness 2</td>
<td>2.098</td>
<td>0.037*</td>
</tr>
<tr>
<td>Readiness 3</td>
<td>5.748</td>
<td>0.001**</td>
</tr>
<tr>
<td>Readiness 4</td>
<td>2.613</td>
<td>0.054</td>
</tr>
<tr>
<td>Readiness 5</td>
<td>0.29</td>
<td>0.833</td>
</tr>
<tr>
<td>Readiness 6</td>
<td>1.665</td>
<td>0.178</td>
</tr>
<tr>
<td>Readiness 7</td>
<td>3.009</td>
<td>0.033*</td>
</tr>
<tr>
<td>Readiness 8</td>
<td>3.675</td>
<td>0.014*</td>
</tr>
<tr>
<td>Readiness 9</td>
<td>5.984</td>
<td>0.001**</td>
</tr>
<tr>
<td>Readiness 10</td>
<td>0.496</td>
<td>0.685</td>
</tr>
<tr>
<td>Readiness 11</td>
<td>0.563</td>
<td>0.64</td>
</tr>
</tbody>
</table>

Note: For all comparisons in this table, the df for the between groups is 3 and the within groups is 127 for a total of 130. * p< .05. ** p<.01.

Significant differences are noted between groups in if deployed would family support systems be available, if individual had ever been separated from family for more than six months, if the individual had any legal matters pending, current working relationship with co-workers in deployment unit, overall feeling of any past deployment.
Section Five: Psychosocial Readiness

<table>
<thead>
<tr>
<th>Item</th>
<th>66XXX (n=79)</th>
<th>91C/91M6 (n=14)</th>
<th>91B/91W (n=5)</th>
<th>All Others (n=33)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 - Amount of current stress with finances</td>
<td>1.71±0.83</td>
<td>1.79±0.69</td>
<td>1.4±0.55</td>
<td>1.97±1.21</td>
</tr>
<tr>
<td>2 - Amount of current stress in other areas</td>
<td>1.22±0.61</td>
<td>1.14±0.36</td>
<td>1.0±0.0</td>
<td>1.52±0.97</td>
</tr>
<tr>
<td>3 - How to access emotional support during deployment</td>
<td>1.08±0.27</td>
<td>1.14±0.36</td>
<td>1.0±0.0</td>
<td>1.15±0.36</td>
</tr>
<tr>
<td>4 - How to access mental health services while deployed</td>
<td>1.18±0.38</td>
<td>1.14±0.36</td>
<td>1.0±0.0</td>
<td>1.09±0.29</td>
</tr>
<tr>
<td>5 - Preparation for death, dying and carnage</td>
<td>2.43±1.29</td>
<td>2.5±1.56</td>
<td>3.2±1.64</td>
<td>2.88±1.21</td>
</tr>
<tr>
<td>6 - Preparation for own death</td>
<td>2.62±1.35</td>
<td>2.07±1.43</td>
<td>2.6±1.81</td>
<td>2.67±1.16</td>
</tr>
<tr>
<td>7 - Preparation to deal with battle stress</td>
<td>2.45±1.13</td>
<td>2.57±1.39</td>
<td>3.0±1.41</td>
<td>2.94±1.27</td>
</tr>
<tr>
<td>8 - Preparation to deal with weather extremes</td>
<td>2.81±1.14</td>
<td>3.0±1.61</td>
<td>3.8±1.64</td>
<td>3.09±1.25</td>
</tr>
<tr>
<td>9 - Preparation to work long hours</td>
<td>3.43±1.05</td>
<td>3.21±1.67</td>
<td>4.4±1.34</td>
<td>3.58±1.09</td>
</tr>
<tr>
<td>10 - Preparation to deal with lack of privacy</td>
<td>2.85±1.23</td>
<td>3.21±1.71</td>
<td>4.6±0.89</td>
<td>3.52±1.22</td>
</tr>
</tbody>
</table>

*Figure 10.* Panoramic display depicting READI profiles and a statistical comparison of active duty nurses, 91M6, 91W and all other MOS’s for self-reported psychosocial readiness.
### Table 14

*Analysis of Variance for Psychosocial Readiness between AOC/MOS*

<table>
<thead>
<tr>
<th>Source</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Readiness 1</td>
<td>0.894</td>
<td>0.446</td>
</tr>
<tr>
<td>Readiness 2</td>
<td>1.94</td>
<td>0.127</td>
</tr>
<tr>
<td>Readiness 3</td>
<td>0.769</td>
<td>0.513</td>
</tr>
<tr>
<td>Readiness 4</td>
<td>0.753</td>
<td>0.523</td>
</tr>
<tr>
<td>Readiness 5</td>
<td>1.287</td>
<td>0.282</td>
</tr>
<tr>
<td>Readiness 6</td>
<td>0.747</td>
<td>0.526</td>
</tr>
<tr>
<td>Readiness 7</td>
<td>1.454</td>
<td>0.23</td>
</tr>
<tr>
<td>Readiness 8</td>
<td>1.249</td>
<td>0.0295</td>
</tr>
<tr>
<td>Readiness 9</td>
<td>1.432</td>
<td>0.236</td>
</tr>
<tr>
<td>Readiness 10</td>
<td>4.492</td>
<td>0.005**</td>
</tr>
</tbody>
</table>

Note: For all comparisons in this table, the df for the between groups is 3 and the within groups is 127 for a total of 130. ** p<.01.

Significant differences are noted between the groups in the extent that are prepared for the lack of privacy should they be deployed.
<table>
<thead>
<tr>
<th>Variable</th>
<th>Number of Times Selected</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>66XXX (n=79)</strong></td>
<td></td>
</tr>
<tr>
<td>Tobacco</td>
<td>7</td>
</tr>
<tr>
<td>Physical Exercise</td>
<td>49</td>
</tr>
<tr>
<td>Relaxation/Meditation Techniques</td>
<td>37</td>
</tr>
<tr>
<td>Talking with Friends</td>
<td>51</td>
</tr>
<tr>
<td>Religious Faith</td>
<td>34</td>
</tr>
<tr>
<td><strong>91M6 (n=14)</strong></td>
<td></td>
</tr>
<tr>
<td>Tobacco</td>
<td>3</td>
</tr>
<tr>
<td>Physical Exercise</td>
<td>6</td>
</tr>
<tr>
<td>Relaxation/Meditation Techniques</td>
<td>4</td>
</tr>
<tr>
<td>Talking with Friends</td>
<td>9</td>
</tr>
<tr>
<td>Religious Faith</td>
<td>2</td>
</tr>
</tbody>
</table>
Of the coping skills used to reduce stress, physical exercise and talking with friends were the two most often selected methods.
Section Six: Leadership and Administrative Support

<table>
<thead>
<tr>
<th>Item</th>
<th>66XXX (n=79)</th>
<th>91C/91M6 (n=14)</th>
<th>91B/91W (n=5)</th>
<th>All Others (n=33)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Understands set up, functions, and command structure of TOE Unit</td>
<td>2.78 (1.14)</td>
<td>2.64 (1.336)</td>
<td>2.4 (1.517)</td>
<td>2.52 (1.326)</td>
</tr>
<tr>
<td>2 - Competent family care plan will work if deployed if single parent or dual military</td>
<td>6.10 (2.01)</td>
<td>4.86 (2.685)</td>
<td>5.8 (2.683)</td>
<td>5.48 (2.539)</td>
</tr>
<tr>
<td>3 - Rate deployment units first-line leader knowledge and concern for soldiers</td>
<td>2.28 (0.861)</td>
<td>1.79 (1.122)</td>
<td>3.0 (1.414)</td>
<td>2.18 (0.983)</td>
</tr>
<tr>
<td>4 - Rate deployment units first line acceptance of responsibility for tough training</td>
<td>2.33 (0.902)</td>
<td>1.79 (1.051)</td>
<td>3.0 (1.414)</td>
<td>2.24 (0.969)</td>
</tr>
<tr>
<td>5 - Rate deployment units first line leader's ability to keep you informed</td>
<td>2.49 (0.875)</td>
<td>1.79 (1.122)</td>
<td>3.0 (1.414)</td>
<td>2.39 (0.933)</td>
</tr>
</tbody>
</table>

*Figure 11.* Panoramic display depicting READI profiles and a statistical comparison of active duty nurses, 91M6, 91W and all other MOS’s for self-reported leadership and administrative support.
Table 16

*Analysis of Variance for Leadership and Administrative Support between AOC/MOS*

<table>
<thead>
<tr>
<th>Source</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Support 1</td>
<td>0.483</td>
<td>0.694</td>
</tr>
<tr>
<td>Support 2</td>
<td>1.505</td>
<td>0.216</td>
</tr>
<tr>
<td>Support 3</td>
<td>2.241</td>
<td>0.087</td>
</tr>
<tr>
<td>Support 4</td>
<td>2.282</td>
<td>2.082</td>
</tr>
<tr>
<td>Support 5</td>
<td>2.933</td>
<td>0.036*</td>
</tr>
</tbody>
</table>

Note: For all comparisons in this table, the df for the between groups is 3 and the within groups is 127 for a total of 130. ** p<.01.

A significant difference was noted between groups in the individuals rating of their deployment unit’s first-line supervisor to keep them informed.
Section Seven: Group Integration and Identification

<table>
<thead>
<tr>
<th>Item</th>
<th>66XXX (n=79)</th>
<th>91C/91M6 (n=14)</th>
<th>91B/91W (n=5)</th>
<th>All Others (n=33)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1- Rate ability to adjust to crowded coed sleeping quarters</td>
<td>3.58 1.139</td>
<td>3.57 1.505</td>
<td>4.6 0.894</td>
<td>4.24 0.867</td>
</tr>
<tr>
<td>2 - Number of days trained with deployment unit in last 12 months</td>
<td>2.75 1.315</td>
<td>2.64 1.447</td>
<td>2.8 1.789</td>
<td>2.94 1.273</td>
</tr>
<tr>
<td>3 - Familiarity with deployment unit's mission, vision and values</td>
<td>3.51 1.386</td>
<td>2.93 1.385</td>
<td>2.8 2.049</td>
<td>3.45 1.603</td>
</tr>
<tr>
<td>4 - Familiarity with your role/duty position in your deployment unit</td>
<td>3.25 1.489</td>
<td>3.14 1.791</td>
<td>2.6 2.191</td>
<td>3.48 1.584</td>
</tr>
</tbody>
</table>

Figure 12. Panoramic display depicting READI profiles and a statistical comparison of active duty nurses, 91M6, 91W and all other MOS’s for self-reported group integration and identification.
Table 17

Analysis of Variance for Group Integration and Identification between AOC/MOS

<table>
<thead>
<tr>
<th>Source</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Identification 1</td>
<td>3.783</td>
<td>0.012*</td>
</tr>
<tr>
<td>Identification 2</td>
<td>0.221</td>
<td>0.881</td>
</tr>
<tr>
<td>Identification 3</td>
<td>0.913</td>
<td>0.437</td>
</tr>
<tr>
<td>Identification 4</td>
<td>0.541</td>
<td>0.655</td>
</tr>
</tbody>
</table>

Note: For all comparisons in this table, the df for the between groups is 3 and the within groups is 127 for a total of 130. * p<.05.

A significant difference was noted in between the groups in their ability to adjust to crowded and joint male/female sleeping quarters while deployed. The first research question asked “Are there differences in perceived competency skills required for deployment in the combat support arena among PROFIS personnel assigned to the fixed facility? The results of the data answers the first question noting positively there are indeed differences in perceived competency skills required for deployment in the combat arena among PROFIS personnel assigned to the fixed facility. The differences may be related to the type of training received at their facility, previous deployments or from skills learned through personal experiences.
The second research question that was asked was “Are there differences in perceived competency levels among PROFIS personnel assigned to various fixed facilities? Two different types of military treatment facilities were chosen to test this research question. One medical treatment facility is considered a community hospital while the other facility is classified as a medical center. An Army community hospital offers “complex, resource – intensive secondary care (e.g., inpatient care, surgery under general anesthesia) at major post, usually 50-150 beds” (Medical Facilities, 2003). An Army medical center (MEDCEN) offers “tertiary care (sophisticated diagnosis/treatment of any ailment) as well as primary and secondary care. MEDCENS have more sophisticated equipment and more specialized staff, and offer wider arrays of specialty care” (Medical Facilities, 2003).

The means and standard deviation were calculated from responses to five-point rating scale to answer the research question. The numbers of items vary by topic and section. The one – way analysis of variance (ANOVA) was employed to test for statistical significance. The data was statistically analyzed at a confidence interval of 95%. Tables 18 - 20 illustrate the statistical results.
Table 18

*Description of PROFIS by Facility and Competency Sections*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Facility</th>
<th>n</th>
<th>Mean</th>
<th>S.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clinical Nursing Competency</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Darnall</td>
<td></td>
<td>29</td>
<td>86.90</td>
<td>24.273</td>
</tr>
<tr>
<td>William Beaumont</td>
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<td>102</td>
<td>91.52</td>
<td>29.144</td>
</tr>
<tr>
<td><strong>Operational Nursing Competency</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Darnall</td>
<td></td>
<td>29</td>
<td>19.83</td>
<td>4.706</td>
</tr>
<tr>
<td>William Beaumont</td>
<td></td>
<td>102</td>
<td>23.31</td>
<td>6.716</td>
</tr>
<tr>
<td><strong>Soldier and Survival Skills</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Darnall</td>
<td></td>
<td>29</td>
<td>33.07</td>
<td>10.103</td>
</tr>
<tr>
<td>William Beaumont</td>
<td></td>
<td>102</td>
<td>35.63</td>
<td>10.072</td>
</tr>
<tr>
<td><strong>Personal and Physical Readiness</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Darnall</td>
<td></td>
<td>29</td>
<td>14.10</td>
<td>3.697</td>
</tr>
<tr>
<td>William Beaumont</td>
<td></td>
<td>102</td>
<td>14.46</td>
<td>2.228</td>
</tr>
<tr>
<td><strong>Psychosocial Readiness</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Darnall</td>
<td></td>
<td>29</td>
<td>47.21</td>
<td>10.988</td>
</tr>
<tr>
<td>William Beaumont</td>
<td></td>
<td>102</td>
<td>52.99</td>
<td>8.140</td>
</tr>
<tr>
<td>Variable</td>
<td>n</td>
<td>Mean</td>
<td>S.D.</td>
<td></td>
</tr>
<tr>
<td>----------------------------------------------</td>
<td>----</td>
<td>------</td>
<td>------</td>
<td></td>
</tr>
<tr>
<td><strong>Leadership and Administrative Support</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Darnall</td>
<td>29</td>
<td>15.03</td>
<td>4.500</td>
<td></td>
</tr>
<tr>
<td>William Beaumont</td>
<td>102</td>
<td>15.51</td>
<td>2.971</td>
<td></td>
</tr>
<tr>
<td><strong>Group Integration and Identification</strong></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Darnall</td>
<td>29</td>
<td>12.34</td>
<td>4.245</td>
<td></td>
</tr>
<tr>
<td>William Beaumont</td>
<td>102</td>
<td>13.51</td>
<td>2.971</td>
<td></td>
</tr>
</tbody>
</table>
Table 19

*Description of Minimum/Maximum Scores by Competency Section and Facility*

<table>
<thead>
<tr>
<th>Variable</th>
<th>Minimum</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Clinical Nursing Competency</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Darnall</td>
<td>33</td>
<td>138</td>
</tr>
<tr>
<td>William Beaumont</td>
<td>36</td>
<td>150</td>
</tr>
<tr>
<td><strong>Operational Nursing Competency</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Darnall</td>
<td>11</td>
<td>36</td>
</tr>
<tr>
<td>William Beaumont</td>
<td>11</td>
<td>41</td>
</tr>
<tr>
<td><strong>Soldier and Survival Skills</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Darnall</td>
<td>11</td>
<td>51</td>
</tr>
<tr>
<td>William Beaumont</td>
<td>11</td>
<td>54</td>
</tr>
<tr>
<td><strong>Personal and Physical Readiness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Darnall</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td>William Beaumont</td>
<td>5</td>
<td>18</td>
</tr>
<tr>
<td><strong>Psychosocial Readiness</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Darnall</td>
<td>19</td>
<td>65</td>
</tr>
<tr>
<td>William Beaumont</td>
<td>21</td>
<td>74</td>
</tr>
<tr>
<td>Variable</td>
<td>Minimum</td>
<td>Maximum</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>Leadership and Administrative Support</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Darnall</td>
<td>5</td>
<td>22</td>
</tr>
<tr>
<td>William Beaumont</td>
<td>5</td>
<td>23</td>
</tr>
<tr>
<td>Group Integration and Identification</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Darnall</td>
<td>4</td>
<td>19</td>
</tr>
<tr>
<td>William Beaumont</td>
<td>4</td>
<td>19</td>
</tr>
</tbody>
</table>

William Beaumont reported slightly higher scores in clinical nursing competency skills, operational nursing competency and psychosocial readiness. As William Beaumont is a large medial center with a trauma center, one would assume nursing personal would experience a greater diversity in patient scenarios. This could account for the higher levels in the perceived competency skills.
Table 20

Analysis of Variance by Competency Section for Different Facilities

<table>
<thead>
<tr>
<th>Source</th>
<th>F</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clinical Nursing Competency</td>
<td>.609</td>
<td>.437</td>
</tr>
<tr>
<td>Operational Nursing Competency</td>
<td>6.639</td>
<td>.010*</td>
</tr>
<tr>
<td>Soldier and Survival Skills</td>
<td>1.455</td>
<td>.230</td>
</tr>
<tr>
<td>Personal and Physical Readiness</td>
<td>.421</td>
<td>.518</td>
</tr>
<tr>
<td>Psychosocial Readiness</td>
<td>9.671</td>
<td>.002**</td>
</tr>
<tr>
<td>Leadership and Administrative Support</td>
<td>.230</td>
<td>.632</td>
</tr>
<tr>
<td>Group Integration and Identification</td>
<td>2.632</td>
<td>.095</td>
</tr>
</tbody>
</table>

Note: For all comparisons in this table, the df for the between groups is 3 and the within groups is 127 for a total of 130. * p<.05. ** p<.01.

Significant differences are noted in the operational nursing competencies and psychosocial readiness between Darnall and William Beaumont medical facilities.

The second research asked “Are there differences in perceived competency levels among PROFIS personnel assigned to various fixed facilities”? As indicated by the data analysis, there are differences in perceived competency levels among PROFIS personnel assigned to various fixed facilities. The differences may result from the training received at the perspective medical
facilities, previous deployments, or through skills learned through personal experiences.

Summary of the Findings

During the pilot study phase of the research study statistical analysis demonstrated the electronic version of the Readiness Estimate and Deployability Index (READI) to be comparable to the original paper-pencil version developed and tested by Reineck et. al. (2001). No major changes were indicated for the tool and the major portion of the research study commenced.

While reviewing the demographics of the study, 30 of the 131 participants indicated they had previous deployment experience in their AOC/MOS. Sixty - three individuals were found to be between the ages of 19 to 30 with 52 participants having less than fours years of service. Twenty-four of the 79 officers reported prior service experience.

This study includes three levels of medical personnel, the registered nurse (66XXX), the licensed practical nurse (91M6) and the certified nursing assistant (91W). Even though three levels of nursing were surveyed, the results were notably parallel. There were no reports of “Totally Competent” in any of the sections and most means were reported at 3.2 or below. The section pertaining to soldier and survival skills portrayed the highest means. Statistical test used with the study included the means, standard deviation and the one-way analysis of variance. Significant differences in perceived competency skills were noted in
all sections of the READI survey and were portrayed by panoramic graphs and ANOVA tables.

Significant differences were noted between Darnall Community Hospital and William Beaumont Army Medical Center only in the areas of Operational Nursing Competency and Psychosocial Readiness.

Overall, the data illustrated a difference in perceived competency skills as compared to previous studies. The means within the six dimensions are lower with this research than previous studies utilizing the READI. Participants reported “low” in over half of the clinical competency skills. Some of those skills included caring for patients in hemorrhagic shock, implementing documentation in a field environment, reconstituting medications, performing in a code situation, implementing ACLS protocols without a physician, caring for life threatening injuries, and implementing triage categories. In operational nursing competencies, the participants indicated they had a low level of competence in obtaining a 12-lead EKG and low to moderate competency skills in DEPMED setup. The participants reported low readiness for dealing with death, dying and carnage. Most felt they had a low to moderate ability to adjust to crowded and coed sleeping quarters, that they did not have enough opportunity to train with their deployment units. Based on the results of the study, these groups of PROFIS personnel tend to project a perceived feeling of not having the appropriate competency skills needed for deployment. These results support previous research findings regarding medical personal and deployments.
In view of the present world situation, as military personnel prepare for a possible deployment, these perceived feelings could impact greatly on mission readiness. Family separation and the unknown greatly influence military deployments. Without the necessary confidence in their nursing skills, individuals could possibly experience even greater levels of stress and discord during deployments, which in turn could impact the quality of care provided.
Chapter 5: Discussion, Conclusions and Implications

Introduction

The purpose of this study was to identify the perceived readiness of United States Army Professional Filler System (PROFIS) personnel in the Great Plains Regional Command regarding nursing competency and readiness for deployment during combat missions or Military Operations Other Than War (MOOTW). Demographic variables included in the study were military occupational specialty/area of concentration (MOS/AOC), number of years in years in the identified MOS/AOC, number of years of military service, any prior enlisted service, previous civilian training, previous deployments, and individual education level. Additional, this study identified that a difference of perceived competency existed at different military facilities. The study was conducted in two phases which encompassed a pilot study and the main research study.

Limitations

Three limitations had been identified for the research. First, the research study utilized a purposive sampling method for the selection of the research participants. Due to the nature of the information needed for the research, the primary investigator felt this was the most appropriate method. Only the individuals who were known to hold a PROFIS position in the Great Plains Regional Medical Command (GPRMC) were invited to participate in the research. Ten military treatment facilities are located in GPRMC region. However, the research study was mandated to the utilization of only two facilities
by the granting agency. Two different types of military medical facilities were
chosen to discern a perceived difference in competency skills based on the type
and size of the facility. One facility was a community hospital and the other was a
medical center. Secondly, the decision to participate in the research may have
been affected by difficulties accessing the electronic survey via a local computer.
Throughout the medical facilities are computers which are available for medical
personnel for personal use during duty hours. Nevertheless, the principal
investigator had no control over any local computer access problems. Thirdly, the
principal investigator was unable to determine individual computer skills prior to
the delivery of the research letter, which may have impact the study.

Another area which may have had an impact on the study was related to
the present world situation. At the beginning of the study, the world was still
recovering from September 11, 2001 terrorist attack. Military personnel were on a
heightened state of alert and the pace of training increased. As the threat of a
pending war continued, more emphasis was placed on deployment readiness
(Walton, 2001, personal communication). This could be a history threat to the
internal validity of the study. A history threat is “a threat to the internal validity of
the study; refers to the occurrence of events external to the intervention but
concurrent with it, which can affect the dependent variable of interest” (Polit &
Hungler, 1995, p.703). However the research commenced almost a full year after
this tragic event therefore the issues may have moderated by the data collection
bagan.
Discussion of Findings and Correlation to Previous Study

In discussing the findings of this study, the principal investigator was mindful of historical events which may have had an impact on the study results. By completion of data collection, military nursing personnel were again on a heightened state of alert due to a possible conflict with Iraq (Walton, 2002, Personnel Communication). Also, October is the timeframe in the military fiscal year when military personnel complete what is referred to as “common task training.” These are routine soldier skills which require hands-on training and testing. Some of these skills are addressed as competencies in the Readiness Estimate and Deployability Index (READI).

Previous studies utilizing the READI were a paper pencil version. The present study converted the previous paper pencil version to an electronic version. The electronic version was found to be comparable to the paper-pencil version during the first phase of the present research study.

As indicated in the literature review, three areas continue to impact preparation for deployment either to combat or military operations other than war (MOOTW). These three areas are competency, military readiness, and psychosocial issues. Of the three, competency continues to be documented as priority for nursing personnel. The three areas will be discussed separately as they pertain to this research and previous studies.
Results Related to Competency

Nursing is practiced in real life situations with real world constraints, possibilities and resources. Certain environments may influence the individual’s ability to respond effectively. As nurses accrue clinical knowledge over time through experience and the sharing of knowledge with peers, there is a need for documentation of the clinical knowledge. Performance measurements can only be as useful and precise as the competencies selected to be measured (Benner, 2001).

Reineck (1999) stated military competency “includes the ideas of technical proficiency, ability to use nursing skills with field equipment, physical assessment skills, clinical decision acumen, and trauma/triage skills” (p. 253). Moreover, competency is related to flexibility to and the ability to function in nontraditional roles. Reineck (1999) also indicates in a combat environment, clinical competency is seen as part of three areas; “(1) military specialty – related skills; (2) military unique skills over and beyond what you normally do in your work place; and (3) trauma intervention capability. Other clinical competencies utilized in combat include increasing autonomy, implementing orders without a physician, triaging, improvising with shortage of supplies, using/trusting your senses during assessment without the benefit of high technology equipment, and caring for a greater diversity of patients in a harsh setting (Norman, 1986; Norman, 1990; Zadinsky, 1995; Stanton & Bandiero, 1998). These concerns were addressed in four previous studies utilizing the Readiness Estimate and Deployability Index.
(READI); by Reineck (1999), Reineck et. al. (2001), Murdock (2001) and Morris (2002). Reineck’s (1999) study involved qualitative research over a period of two years in which concept clarification regarding individual readiness took place. During the phase one process, the READI underwent several refinements. The six dimension of the READI was the outcome of phase one. Reineck’s 2001 study involved a test – retest of the pilot version of the READI. The sample consisted of 31 nurses in the continental United States. Eight expert raters estimated the content validity of the pilot version. The panel of experts rated the pilot version on a scale of 1 (low) to 4 (high). Each item of the READI was rated an average of 3.6 in regards to relevance, clarity, and uniqueness. After the completion of the data analysis, the panel of experts reviewed the data results and offered suggestions for addition and deletion of items. The items were then incorporated into the revised READI.

Murdock’s (2001) study was a test – retest evaluating the reliability and internal consistency of the revised READI tool. Three separate groups of nurses were surveyed including both active duty and reserve for a total of 93 participants. None of the nurses reported the highest level of competency in any of the six dimensions of the READI.

Clinical Nursing Competency

In Murdock’s (2001) study, nurses reported a moderately high level of clinical competency in regards to shock, triage, and airway management, instituting standing orders, and describing the life-saving ABC (airway, breathing,
and circulation) principals, a moderate to low level of competency in the use of the field ventilator, antepartum care, caring for patients with nuclear, biological, and chemical (NBC) injuries, and ballistic missile injuries.

Morris’s study (2002) was a comparison study of Medical Command (MEDCOM) nurses (n=97) attending a military course at the Army Medical Department School and PROFIS/FORSCOM (Professional Filler System/Forces Command) Nurses (n=50) located at a single military community medical facility. Morris indicated there were significant differences between the groups in all dimensions of the READI except soldier and survival skills. Nurses reported high competency in following standing orders, completing nursing assessment and reporting abnormal findings, identifying components of the physical exam. Low competency areas noted in Morris’s (2002) study included caring for patients with NBC injuries and using a field ventilator.

The present research study included three different levels of nursing (n=131) at two military treatment facilities. Significant differences were noted between the groups in all six dimensions of the READI. As with the study by Murdock (2001) none of the respondents reported the highest level of competence. The scale for reporting was a likert type scale with one equating to “Not Competent” and five being “Totally Competent”. A moderate to high level of competence was noted in areas such as following standing orders, responding to code situations and deciding who would be seen first in a shock scenario. Low levels of competence were reported in dealing with nuclear biological patients
and field ventilators as reflected in both Murdock’s (2001) Morris’s (2002) study. All three groups reported “Most Competent” in providing direct patient care, airway management, IV skills, and describing ABC principals.

Operational Nursing Competency

Nurses reported moderately high competency for reporting unlawful orders in Murdock’s study (2001) and low competency in the ten other areas of operational competency. Morris (2002) indicated the groups noted the highest competency means in field sanitation, and procedures for reporting unlawful acts. The lowest areas included knowledge of evacuation procedures, obtaining a 12-lead EKG and DEPMED proficiency. This research study indicated all groups reported moderately high competency in field sanitation and hygiene and Deployable Medical Systems (DEPMEDS) proficiency. Slightly low competency means were reported in evacuation procedures, reporting unlawful acts and echelon of care. Very low means were noted in the use of the 12-lead EKG and suction apparatus. These weaknesses in competencies support the previous studies.

Results Relating to Readiness

Olson (1997) defines readiness as the “ability to train, maintain, and sustain to meet mission goals” (p. 76). Reineck (1999) describes individual readiness as a “dynamic concept with dimensions at the individual, group, and system levels which, together, influence one’s ability to prepare to accomplish the mission” (p. 253). Nursing personnel must be trained to function efficiently for the next military
deployment. If medical personnel are not trained effectively, Sebasta (1990) states, “many will die as lessons are relearned” (p. 227). Kennedy, Hill, Adams & Jennings (1996) indicated Army nursing personnel are at risk for being unprepared for the millennium without a conceptual model to guide professional practice and training. Individual readiness must be a priority for all nursing personnel as nurses must sustain the health of the soldiers to meet deployment missions. “Readiness is fundamental to army nursing—readiness for deployment, readiness for the future of health care” (Kennedy, Hill, Adams & Jennings, 1996, p. 36).

**Soldier and Survival Skills**

Active duty nurses in Murdock’s study reported moderately high competency in all areas except for familiarity with Army communication equipment and reservist rated themselves in low to moderate in familiarity with the 9mm pistol, maintaining their weapon, and Army communication equipment. Both groups in his study rated high for performing their duties during adverse conditions (Murdock, 2001). Morris (2002) indicated all items in this subsection were rated at or above the mean of 3.0 with very little variability between the two groups.

The current study indicated slightly different results than the previous two studies. The results were fairly consistent across the three groups with the means varying from 2.25 to 3.43. The lowest item score among all three groups was competence in the ability to resist the enemy if captured. The highest rated
item was the ability to navigate using a map and a compass. The enlisted soldiers reported greater competence in using the Army communication equipment than the officers. All groups rated moderately in the ability to defend oneself and their patients and using the M40 mask and protective gear during a nuclear biological chemical (NBC) attack.

**Personal and Physical Readiness**

As with the previous studies, this research study results indicated PROFIS personnel were moderately ready to mostly ready in all the categories. Very few personnel were noted to have physical restrictions which limit them during deployments and all personnel had moderate scores on their physical training test. All had met their dental exam requirements.

**Results relating to Psychosocial Readiness**

A third issue, which impacts on competence and readiness, is the psychosocial issues dealing with deployment. Nursing personnel are separated from families in unfamiliar territory. They must adjust to living in close surroundings, without the luxuries of everyday living. Isolated from the rest of the world, nursing personnel turn to wartime friends to meet the needs of family. Friends form groups and the groups became “families.” These “families” made nurses feel needed, protected, and loved (Norman, 1990). Flannery (1987) notes the support of human beings depending on one another during is significant in reducing stressful situations (Flannery, 1987). Stanton & Bandiero (1998) documented nursing personnel sought camaraderie while deployed. The authors
indicated the special bonds formed during and remaining after the deployment experiences were critical to the nurses well-being.

*Psychosocial Readiness*

As with previous studies, (Murdock, 2001) & (Morris, 2002) the current research participants had high scores in rating any pending legal matters, having a care plan if applicable and family support during deployment. All participants indicated low to moderate relating to stress at home or work. Murdock (2001) reported moderate levels of readiness relating to death, carnage, one’s own death, battle stress and weather extremes and a high level in readiness related to long hours.

In contrast, this recent study indicated low levels of readiness relating to death, carnage, one’s own death, battle fatigue and weather extremes. The research participants did indicate a moderately high level of readiness for long work hours.

*Leadership and Administration Support*

Murdock (2001) reported this section as the lowest scored area in his study. The current study reflects the same results. PROFIS personnel indicate a low level of competency regarding perceived leader concerns. Also, they indicate a low level of competency in the ability of their first-line deployment supervisor to keep them informed. PROFIS personnel are not always located/stationed close to their assigned PROFIS unit. Therefore, they may not have had the
opportunity to meet their deployment first-line supervisor or had the chance to train with their deployment unit.

*Group Integration and Identification*

Self reported ratings for readiness to adjust to crowded and co-ed sleeping quarters were moderately high in Murdock’s (2001) study and this research study. Murdock’s study indicates low levels of readiness in the items of familiarity deployment unit’s mission, vision and values, days trained with deployment unit, and their individual role/duty in their deployment unit. This study indicated moderate readiness levels in all items except for number of days trained with deployment unit which was low level of readiness.

*Conclusion*

The results from this research study support the perceived difference in competency levels among PROFIS personnel. This study supports previous research studies in need of preparation for deployments to either a combat area or MOOTW. Areas which impact deployment readiness have been documented in the literature and are reflected in the study. Specific competencies which scored low in previous studies remained low in this study as well. PROFIS personnel must be ready to deploy at any given time to areas which may be dangerous and austere in nature. They must be trained and competent in their skills to provide quality patient care in the combat arena. This study establishes the need for a core competency tool to be designed to facilitate competency skill training for PROFIS personnel.
Implications for Continuing Competency Education/Training

This research has implications for continuing competency education/training. As the leaders of PROFIS personnel establish training and educational plans in preparation for future deployments, they need to ensure there is competency educational training in specific nursing competencies skills, ie; obtaining a 12-lead EKG with field equipment, operating a field ventilator, DEPMEDS training, and field documentation. Mock codes and complete nursing assessment training are also identified areas of needed continuing education. Triage, IV competency, and evacuation skills are important in any type of disaster whether at home or during deployment.

Implications for Nursing Practice

Many of the competency skills addressed in this research are skills which are applicable to any nursing practice whether it is civilian or military. During the aftermath of the September 11th terrorist attack, both military and civilian nursing personnel worked together to care for the injured. As they have worked together, they need to train together. Disaster drills involving both military and civilian personnel would allow for cross training in nursing practice. Areas which should be addressed for joint training include: treatment and care of nuclear, biological and chemical casualties, learning to appropriately triage casualties, establishing triage stations, practicing field expedient nursing care in response to massive casualties resulting from a natural disaster or future terrorist attack, such as complete nursing assessments regarding trauma patients, scenario’s regarding
hemorrhagic shock, severe burns, ballistic missile injuries and setting up emergency aide stations/treatment centers. Psychological competency skills in dealing with excessive death and carnage are a very important issue which should be addressed. The READI could be adapted to fit the civilian nursing arena and become a very useful tool for disaster preparedness. The areas which would be most applicable to the READI are the emergency departments, intensive care units, medical/surgical units and burn units. The investigator estimates that approximately 85% of the READI is applicable to the civilian sector. The READI would need civilian content expert input for adaptation to the civilian environment.

Implications for Nursing Research

Future administrations of the READI are needed to compare self-rated readiness both before and after deployments. When the READI has been adapted to the civilian sector, it should be afforded the same rigorous pilot testing as it enjoyed in the military community. A meta-analysis should be initiated in the future for comparison of studies. Research is needed for the establishment and testing of a core competency tool to support the READI in deployment readiness.

Summary

As military nursing personnel continue to deploy during times of combat or during MOOTW, providing care in strange, possibly dangerous environments, they must be trained to meet the diversity of injuries from patients they may encounter. This research and that of previous studies utilizing the Readiness
Estimate and Deployability Index support the need of a core competency tool to augment the READI. This thesis provides the evidence that a core competency is needed. Future research will focus on development and piloting of a core competency tool for PROFIS personnel dispersed world wide.
References


Appendix A

THE UNIVERSITY OF TENNESSEE AT CHATTANOOGA
RESEARCH PROTOCOL FOR REVIEW BY HUMAN SUBJECTS COMMITTEE

Project Director: Felicia H. Rivers
Co-Director: Dana H. Wertenberger
Department: Nursing – Graduate Student
Department: Nursing – Director Graduate

Address and phone numbers of Project Director and Co-Director:
(For student projects, list both student and advisor)

Project Director: Advisor:
1048 Graysville Rd School of Nursing
Chattanooga, TN 615 McCallie Ave
(423) 553-0440 Chattanooga, TN
(423) 425-4750

Title of Project: Identifying Competency Skills of PROFIS Personnel (N02-018)
Supporting Agency and Identification Number (if known): TriService Nursing Research Program Grant
MDA-095-02-1-TS04
Estimated Starting Date and Completion Date: June 2002 – May 2003
Grant Submission Deadline: 4 Dec 2001

Research Questions of Thesis:
1. Are there differences in perceived competency skills required for deployment in the combat support arena among PROFIS Personnel assigned to the fixed facility?
2. Are there differences in perceived competency levels among PROFIS Personnel assigned to various fixed facilities?

II Subjects (selection method, populations, description):
The population to be studied is the Army Nurse Corps Officers and enlisted personnel assigned to a combat support unit in the 1st Medical Brigade. The 1st Medical Brigade includes personnel assigned to duty at two different army military treatment facilities which extend across the Great Plains Region. Inclusive in this region are military installations in Texas, Kansas, Colorado, and Louisiana. The sample size is estimated to include approximately 400 personnel. PROFIS Personnel are active duty soldiers, both enlisted and officer, who are assigned to an army military treatment facility. They are additionally assigned to a combat support unit and will deploy with that specific unit in time of war or on a humanitarian mission.

III Methods or Procedures (attach copy of human subjects consent form):
The proposed study utilizes a descriptive, quantitative research design. The self reported survey, the Readiness Estimate and Deployability Index (READI) tool, which has documented reliability and validity in numerous studies by COL Carol Reineck and her associates, will be employed. Tools will be distributed to eligible participated in the two fixed medical facilities by electronic version. Upon completion and returned to the primary investigator, the data will be analyzed for individual readiness, differences of competency between the fixed facility and combat support units. Based on the findings, specific competency assessments will be designed to meet the needs of the combat support units.

IV Committee Decision and Comments:

Signatures:

Investigator
Date

Advisor
Date

Department Head
Date

Chair, Human Subjects Committee
Date
Appendix B

MCHE-Ci (15a) 03 May 2002

MEMORANDUM FOR CPT Felesia M. Rivers, Student Department, AMEDD C&S

SUBJECT: Expedited research status of amendment to protocol entitled: "Identifying competency skills of PROFIS personnel" (C2002.124d)

1. The undersigned has reviewed the aforementioned amendment to protocol and judged it to qualify for Expedited Research status IAW AR 40-38 H-10 (Behavior), 45 CFR 46.110, 25 CFR 56.110 and as specified in the Federal Register (63 FR 60364 - 60367). The hypothesis was changed to:

1) Are there perceived differences in competency skills required for deployment in the combat support arena among PROFIS Personnel assigned to the fixed facility and 2) Are there perceived differences in competency levels among PROFIS Personnel assigned to various fixed facilities?

2. The IRB will be notified of this action at its next regularly scheduled meeting. POC for this action is the undersigned at (210) 916-1005.

[Signature]

ARNOLD A. ASP
COL, MC
Co-C, IRB BAMC
MEMORANDUM FOR Commander, Brooke Army Medical Center, ATTN: MCHE-CI,
Fort Sam Houston, TX 78234-6200

Felicia Rivers, AN. BAMC C2002.124d. CIRO 2002620.

1. The Clinical Investigation Regulatory Office has completed review of the above-
 referenced protocol and determined that human use protection regulations have been met. We
concur with your 1 May 2002 IRB approval and with the projected funding by the TriService
Nursing Research Program. Any outstanding concerns have been addressed to our satisfaction.
We herewith grant approval for the study to commence at Darnall Army Community Hospital.

2. POC is Christina Jones at 221-9322.

JAMES M. LAMIELI,
COL, MC
Chief, Clinical Investigation
Regulatory Office

CF:
Director, TriService Nursing
Research Program, USUHS
Appendix C

MEMORANDUM FOR CPT Felecia Rivers, AN, Principal Investigator and LTC Ray E Horn, MC, Associate Investigator

SUBJECT: Notice of Approval

1. Your proposal for a research study, Identifying Competency Skills of PROFIS Personnel, was assessed and approved as exempt from board review under the provision of AR 40-38, Appendix B, paragraph B-2, “Health Care Delivery and Epidemiology.” It involves health care delivery studies or routine epidemiological survey that involve test or procedures of no more than minimal risk.

2. The Work Unit Number for your protocol is WBAMC Protocol #02/25 and must be on all correspondence pertaining to the study.

3. You should inform the Chief, Department of Clinical Investigation (DCI) to bring to the committee any changes in the protocol, investigators, or any adverse events/reactions, which may relate in any way to the study. Furthermore, a research progress report must be submitted to the Chair, IRB upon completion of the study or 26 April 2003, whichever comes first. Your records are subject to review by the IRB Chair or her designee at any time.

4. You will receive a final letter of approval when the Hospital Commander confirms the IRB minutes. The memorandum will address continuing review and procedures for amendments or changes to your protocol.

5. Please be advised that our Clinical Investigation Regulatory Office (CIRO) in San Antonio, TX reviews all protocols. Although your protocol was approved and you are free to commence the study, CIRO may recommend changes, which must be addressed. If this occurs, you will be advised under separate cover. In the meantime, you may commence your study.
MCHM-DCI (40-38a)
SUBJECT: Notice of Approval

6. You are also advised that any equipment/resources that might be obtained during the life of the study must be reported to the Chief, DCI for accountability purposes.

7. POC for this action is Ms. Torres, Clinical Protocol Specialist at 569-2485.

For IDELE M. WEISMAN, MD
COL, MC
Chair, Institutional Review Board

By my signature below, I acknowledge receipt and accept full responsibility for this research protocol.

[Signature]

JAN 02
Date
Appendix D

UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES
4301 JONES BRIDGE ROAD
BETHESDA, MARYLAND 20814-4799

TriService Nursing Research Program

June 20, 2002

Ms. Diane Miller
Director, Grants & Contracts
University of Tennessee at Chattanooga
615 McCallie Avenue
Chattanooga, TN 37403

RE: TriService Nursing Research Program Grant MDA-905-02-TS04, “Identifying Competency Skills for PROFIS Personnel” (N02-018), CPT Felicia Rivers

Dear Ms. Miller:

We have received the human use documentation from Brooke Army Medical Center (BAMC) and William Beaumont Army Medical Center’s (WBAMC) Institutional Review Boards (IRB). The documentation has undergone secondary review by the Uniformed Services University (USU) IRB. Please find enclosed the USU IRB approval letters dated May 10, 2002 for your records.

We await the receipt of the human use documentation from the University of Tennessee IRB. The Principal Investigator was contacted yesterday for additional materials. Upon receipt, the USU IRB will review the materials. In addition, the Principal Investigator and any team members that will come in contact with human subjects must receive training/education in the use of human subjects in research (see DoD Directive 3216.2). The Principal Investigator is aware of this requirement and is in the process of receiving such training. A copy of the training/education course completion certification must be forwarded to this office prior to contact with any human subjects.

Since secondary review by the USU IRB has been performed and the conditions noted in the Notice of Grant Award have been met, the Principal Investigator can commence research. Please consider this the official start letter for BAMC and WBAMC data collection sites. In addition, please find enclosed an executed copy of the Grant Agreement for the above referenced TriService Nursing Research Program grant.

If you have any questions or concerns, please contact Ms. Anne Reedy at (301) 295-7034.

DIEP N. DUONG, Lt Col, USAF, NC
Director
TriService Nursing Research Program

Enclosures: as stated

cc: Captain Rivers
TriService Nursing Research Program

July 16, 2002

Ms. Diane Miller
Director, Grants & Contracts
University of Tennessee at Chattanooga
615 McCallie Avenue
Chattanooga, TN 37403

RE: TriService Nursing Research Program Grant MDA-905-02-TS04, "Identifying Competency Skills for PROFIS Personnel" (N02-018), CPT Felecia Rivers

Dear Ms. Miller:

We have received the human use documentation from University of Tennessee-Chattanooga Institutional Review Board (IRB). The documentation has undergone secondary review by the Uniformed Services University (USU) IRB. Please find enclosed the USU IRB approval letter dated June 25, 2002 for your records.

Since secondary review by the USU IRB has been performed and the conditions noted in the Notice of Grant Award have been met, the Principal Investigator can commence research. Please consider this the official start letter for the remaining performance site, University of Tennessee-Chattanooga. If you have any questions or concerns, please contact Ms. Anne Reedy at (301) 295-7034.

Enclosure: as stated

cc: Captain Rivers
Appendix E

10 December 2001

3851 Rodger Brooke Drive
Fort Sam Houston, TX 78234-6200

Felicia M. Rivers
CPT, AN
1048 Graysville RD
Chattanooga, TN 37421

Dear CPT Rivers,

I support your research study entitled “Identifying Competency Skills of PROFIS Personnel” if your study receives funding after the scientific review by the Tri-Service Nursing Research Program and approval by the Institutional Review Board of the Great Plains Regional Medical Command. I understand the study will begin in June 2002 and utilize an electronic version of the Readiness Estimate and Deployability Index (READI) tool designed by COL (RET) Carol Reineck (1999), which the research participants will access via a web link provided to them in the consent letter.

I realize this research study is in partial completion of your master’s degree in Nursing Education at the University of Tennessee, Chattanooga. I wish you well in completing graduate studies.

Sincerely,

[Signature]

THERESA M. TOMINEY
Colonel, U.S. Army Nurse Corps
Chief Nurse, Great Plains Regional Medical Command
Appendix F

Hinson, Nolan J COL DACH-Ft Hood <Nolan.Hinson@CEN.AMEDD.ARMY.MIL
Thursday, November 29, 2001 6:43 PM
'Felecia Rivers' <frivers214@home.com
RE: Regarding research & JCAHO

I am very sorry to hear about your loss. It is going to be a long term recovery period for you. Don't rush.
I misunderstood what I needed to do for your research. I as well each of the Department Chiefs will be more than happy to support your research proposal. Also, I thought that I saw a message that COL Tominey as the Regional Chief Nurse supported your research. That agreement essentially makes all Chief Nurses in the region support your research. Hope this is what you needed.

-----Original Message-----
From: Felecia Rivers [mailto:frivers214@home.com]
Sent: Tuesday, November 20, 2001 6:10 PM
To: Hinson, Nolan J COL DACH-Ft Hood
Subject: Regarding research & JCAHO

Hi Sir, Just wondered how JCAHO went...good I hope. You stated you needed to wait until after JCAHO before you could commit to supporting the research, so I was just checking back with you...I need a confirmation so I can include it in my proposal...an electronic support letter is fine...most have been very short...just stating they will be glad to work with me...
I have been out of the loop a while....I just buried my 28 year old daughter...she was killed in a car accident on the 7th of November...my two grandchildren remain in serious condition in Children's Hospital Birmingham....I am trying to bring this proposal together and get on with my life...It has been extremely tough. Give everyone my regards and I hope to hear from you soon.

Felecia M. Rivers
CPT/AN
Graduate Student
University of Tennessee at Chattanooga
frivers214@home.com
(423) 553-0440
Appendix G

Shriver, Natalie M COL WBAMC <Natalie.Shriver@AMEDD.ARMY.MIL
Friday, November 09, 2001 3:50 PM
frivers214@home.com' frivers214@home.com
FW: Permission for Research
CPT Rivers,

I am the Chief, Dept of Nursing at WBAMC. I have no objections to having our nursing staff participate in this research and would be glad to participate. We have no nursing research dept here (Dept of Clinical Investigations) therefore COL Abbott, would serve as our resource since being in the GPRMC. We look forward to working with you on your research.

COL Shriver

-----Original Message-----
From: West, Iris COL WBAMC
Sent: Tuesday, November 06, 2001 9:21 AM
To: Shriver, Natalie M COL WBAMC
Subject: FW: Permission for Research

Natalie: I'll let you handle this one.
-----Original Message-----
From: Felecia Rivers [mailto:frivers214@home.com]
Sent: Tuesday, November 06, 2001 7:36 AM
To: iris.west@CEN.amedd.army.mil
Subject: RE: Permission for Research

Dear COL West,
My name is CPT Felecia Rivers. I am a graduate student at University of Tennessee at Chattanooga. I am presently preparing my proposal for a TriService Research Grant and I need permission to perform research at the different installations to accompany my proposal. The email permission is only temporary until I can get hard copy to you through the mail for signature.

The title of my proposed research is: Identifying competency skills of PROFIS Personnel.

The population to be studied is the ANC officers and their enlisted counterparts working in a fixed facility assigned to the 1st Medical Brigade as PROFIS.

I will be utilizing the Readiness Estimate and Deployability Index(READI) tool designed by COL Reineck and her associates. I plan to have the READI converted to electronic version so the participants can access it via the internet. I will then compare the READI to a core competency tool which was designed for each level of nursing care. IE, RN, 91C, 91B.

The Objectives of the research are: (1) Identify the difference between the competences of the PROFIS Personnel specific to the fixed facility in relation to that of the combat support unit, (2) Determine individual readiness of the PROFIS personnel today assigned to the 1st Medical Brigade, (3) Identify deficiencies in competencies of the PROFIS specific to the combat support unit.

The research study is planned to begin in June 2002 as soon as I hear back from TriService regarding the grant.
I hope to use six of the military medical facilities across the Great Plains Region; your facility, Darnall, Evans, Irwin, Bayne-Jones, and Brooke.

Also, I would like to do a comparison of the different Department of Nursing policy's and core competency tools presently in use at the different installations with regard to the RN, 91C & 91B. It would be very helpful if you were able to share this information with me. Email versions are fine.

May I have a good mailing address so I can get you hard copy of the letter of support?

I look forward to hearing positively from you soon regarding the support of the research. Please don't hesitate to contact me for farther clarification of the proposed research. I will be glad to share the results with you on completion of the research study.

Thank you in advance for your time and consideration regarding the research study.

Felecia M. Rivers  
CPT/AN  
Graduate Student  
University of Tennessee at Chattanooga  
frivers214@home.com  
(423) 553-0440
Appendix H

R.E.A.D.I. (Pilot Letter)

Readiness Estimate and Deployability Index

Dear fellow Army Nurse Corps Officers and Enlisted Personnel;

You are being invited to participate in a pilot study of an electronic version of the Readiness Estimate and Deployability Index (READI), which is an Army Readiness Survey. This study involves completing and returning the Readiness Estimate and Deployability Index or READI survey through an internet connection. To maximize efficiency in the environment of today’s high operational tempo, leaders need a way to measure readiness in Army Nurses before, during and after deployment. The READI is an innovative survey, designed and tested by nurses, that assesses readiness.

As the READI has never been administered electronically, a pilot test must be completed. You will take the survey now (if you choose to participate) and then you will receive a follow-up reminder to retake the survey in two weeks. This pilot study is part of a research project for a master’s degree in Nursing Education, researching readiness of PROFIS personnel.

If you recently participated in CPT Mark Morris study using the paper version of the READI, please do not participate in the pilot test of the electronic version.

It is important to the principal investigator that you know that your participation is totally voluntary. If you do choose to participate, you will be giving your consent by completing and returning the survey. You can rest assured that controls are in place to ensure that your participation remains completely confidential. Do not put your name or personnel address on the survey. Upon receipt of the completed survey, data from the READI will automatically be entered into a database. Your name is not entered into the database and the survey cannot be linked to you in any way. The mailing list is maintained in a logbook and secured in a cabinet. The anonymous data and surveys and will be maintained, and may be used for future comparison studies by the research investigator. The information obtained by the research study may be presented in aggregate form in various published formats.

Instructions for Completing READI Survey

To take the READI, simply answer the questions in each section by accessing the survey via the following web link: http://www.utc.edu/~pstaylor/readi/index.htm. Please answer all the questions completely. It also important you answer the questions as accurately as possible according to your experiences and competence.

After completed and submitted the survey, you are done. You may then click on the back button on the tool bar to leave the readiness survey. Should you not have Internet
capability or prefer a paper copy of the survey, please contact Ms April Anderson at (423) 425-4750. She will be glad to provide one for you.

Thank you in advance for your time and consideration in completion of the survey and contributing to the success of this research study. Results from this study will be used to assist or provide tools for improving readiness competencies for PROFIS personnel. The results of the study will be available in early Spring 2003.

If you would like a summary of the study, or have any questions, please feel free to contact CPT Felecia Rivers, the Principal Investigator at (423) 553-0440 or email: frivers214@comcast.net. If unable to contact the Principal Investigator, you may also contact Dr. Dana Wertenberger (Mentor & Chair of Research Committee) at (423) 425-4724 or email her at Dana.Wertenberger@utc.edu.

Thank you in advance for your time and effort in participating in the research study.

Sincerely,

Felecia M. Rivers
CPT, AN
Graduate Student
University of Tennessee, Chattanooga
(423) 553-0440
Appendix I

R.E.A.D.I. (Main Research Letter)

Readiness Estimate and Deployability Index

Dear fellow Army Nurse Corps Officers and Enlisted Personnel;

You are being invited to participate in a research study of utilizing an electronic version of the Readiness Estimate and Deployability Index (READI), which is an Army Readiness Survey. This study involves completing and returning the Readiness Estimate and Deployability Index or READI survey through an Internet connection. To maximize efficiency in the environment of today’s high operational tempo, leaders need a way to measure readiness in Army Nurses before, during and after deployment. The READI is an innovative survey, designed and tested by nurses, that assesses readiness.

The purpose of the survey is to identify any problem areas in present level of readiness for deployment. The data obtained from the readiness survey will be employed to identify specific competency skills needed for the combat support units that are above and beyond those needed for a fixed facility. This survey is part of a research project for a master’s degree in Nursing Education, researching readiness of PROFIS personnel.

It is important to the principal investigator that you know that your participation is totally voluntary. If you do choose to participate, you will be giving your consent by completing and returning the survey electronically. You can rest assured that controls are in place to ensure that your participation remains completely confidential. Do not put your name, unit or address on the survey. Upon electronic submission of the completed survey, data from the READI will automatically be entered into a database. Your name and unit are not entered into the database and the survey cannot be linked to you in any way. The mailing list is maintained in a logbook and secured in a cabinet. The anonymous data and surveys will be maintained, and may be used for future comparison studies by the research investigator. The information obtained by the research study may be presented in aggregate form in various published formats.

Instructions for Completing READI Survey

To take the READI, simply answer the questions in each section by accessing the survey via the following web link: http://www.utc.edu/~pstaylor/readi/index.htm. Please answer all the questions completely. It also important you answer the questions as accurately as possible according to your experiences and competence. After completing and submitting the survey, you are done. You may then click on the back button on the tool bar to leave the readiness survey. Should you not have Internet
capability or prefer a paper copy of the survey, please contact Ms April Anderson at (423) 425-4750. She will be glad to provide one for you.

If you would like a summary of the study, or have any questions, please feel free to contact CPT Felecia Rivers, the Principal Investigator at (423) 553-0440 or email: frivers214@comcast.net. If unable to contact the Principal Investigator, you may also contact Dr. Dana Wertenberger (Mentor & Chair of Research Committee) at (423) 425-4724 or email her at Dana.Wertenberger@utc.edu.

Please accept the Internet resource card as a thank – you for considering participation in the research study.

Thank you in advance for your time and consideration in completion of the survey and contributing to the success of this research study. Results from this study will be used to assist or provide tools for improving readiness competencies for PROFIS personnel. The results of the study will be available in early Spring 2003.

Sincerely,

Felecia M. Rivers
CPT, AN
Graduate Student
University of Tennessee, Chattanooga, TN
(423) 553-0440
Appendix J

Follow-up Postcard Reminder

Dear Fellow Army Nurses and Enlisted Personnel,

About two weeks ago, a cover letter/consent form was mailed to you regarding Readiness. I realize you may not have had time to complete the electronic survey, so I am writing you again as a friendly reminder. In order for the information from the study to be truly representative, and the study to be successful, maximum participation is critical.

Please take a few minutes to complete the survey today. If you have already completed the survey, please accept my thanks for your participation in this important research study. Please call CPT Felecia Rivers at (423) 553-0440 during business hours if you have any questions or email her at frivers214@comcast.net
Appendix K

R.E.A.D.I. (Revised)
Readiness Estimate and Deployability Index

Demographic Data

1. What is your area of concentration (AOC), if an officer, or military occupational specialty (MOS) if enlisted? (check one)
   [ ] 66C - Psychiatric Nurse  [ ] 66H8F - Community Health Nurse
   [ ] 66E - Perioperative Nurse  [ ] 66H8G - OB-GYN Nurse
   [ ] 66F - Nurse Anesthetist  [ ] 66HM5 - Emergency Nurse
   [ ] 66H00 - Medical Surgical Nurse  [ ] 91B/91W - Medical Specialist
   [ ] 66H8A - Critical Care Nurse  [ ] 91C/91M6 - Licensed Practical Nurse
   [ ] 66H8D - Nurse Midwife  [ ] 91D - Surgical Technician
   [ ] 66H8E - Nurse Practitioner  [ ] 91X - Behavioral Health Technician
   [ ] Other _________________

2. How many years military experience, do you have in the nursing AOC/MOS you checked in question number 1 above? _____ years.

3. Do you have prior enlisted time in the medical field?  Yes ____  No ____

4. If you answered yes in question three, what was your MOS? _____

5. Please enter how many years prior enlisted service you have? ______

6. Please enter how many years civilian experience you have in the medical field? _____

7. If you have had civilian experience in the medical field, what was your area of expertise? ______

8. What is your highest education level?
   [ ] High School diploma/GED
   [ ] No degree, but have completed some college
   [ ] Diploma in Nursing
   [ ] Associates in Nursing
   [ ] Associates outside of nursing
   [ ] Bachelors in Nursing
   [ ] Bachelors other than nursing
   [ ] Masters in Nursing
   [ ] Masters other than nursing
   [ ] Doctorate in Nursing
   [ ] Doctorate outside of nursing

9. To what major command are you assigned? (check one)
   [ ] USA Medical Command (Incl. Europe, Japan, and AMEDD C&S)
   [ ] USA Forces Command (FORSCOM)
   [ ] Other
10. If you are assigned to USA Medical Command, are you a professional filler (PROFIS)? (check one)
[ ] Yes [ ] No [ ] Uncertain

11. What is your present military rank?
[ ] 01 2nd Lieutenant [ ] E1-E3 Private, Private E-2, Private First Class
[ ] 02 1st Lieutenant [ ] E-4 Specialist
[ ] 03 Captain [ ] E-5 Sergeant
[ ] 04 Major [ ] E-6 Staff Sergeant
[ ] 05 Lieutenant Colonel [ ] E-7 Sergeant First Class
[ ] 06 Colonel [ ] E-8 Master Sergeant
[ ] E-9 Sergeant Major

12. What is your gender?
[ ] Male [ ] Female

13. What is your age group?
[ ] 19-25 [ ] 26-30 [ ] 31-35 [ ] 36-40 [ ] 41-45 [ ] 46-50 [ ] 51 and above

14. To what type of unit are you assigned? (check one).
[ ] TO&E Unit. A tactical unit which may be deployed for combat.
[ ] TDA Unit
[ ] Other

15. What is your deployment status? (check one)
[ ] I am currently deployed
[ ] I am not deployed but will be deployed within 90 days.
[ ] I am not deployed at this time and will not likely be deployed in the next 90 days.

16. Have you ever been deployed in your current AOC/MOS?
[ ] Yes [ ] No

17. If you answered yes in question 16, what year was you deployed? __________

18. When did you last participate in any field training? (Month/Year). ______________

19. How long was the training? _____ days, ______ month/s

20. Which medical facility are you assigned to?
[ ] Darnall Army Community Hospital
[ ] William Beaumont Army Medical Center
Section One
Clinical Nursing Competency

Shock/Documentation

1. How familiar are you with the different types of shock?
   [ ] Not Familiar    [ ] Somewhat Familiar    [ ] Moderately Familiar
   [ ] Quite Familiar  [ ] Totally Familiar

2. How competent are you in caring for patients in hemorrhage shock?
   [ ] Not competent    [ ] Have training, but no experience    [ ] Have training and
   minimal experience
   [ ] Have training and moderate experience    [ ] Totally Competent

3. Consider this situation. You are deployed. You get to the scene of a MASCAL.
   There is ground ambulance support. There is one person who appears to have been hit
   in the leg. The patient is losing a steady stream of blood. The patient's vital signs are stable
   now. You placed a dressing over the wound, but you noticed you have to keep
   reinforcing it. The ambulance driver wants to know if the patient can wait till the next
   run to the treatment facility or if the patient has to go immediately. What is your
   assessment? (check one)
   [ ] The patient can wait for the next ambulance. Patient is stable.
   [ ] Patient has to go on the first ambulance. Increased potential for hypovolemic shock

4. Check the number that represents your competency with clinical documentation (use
   of SF 510,511) in a field environment.
   [ ] Not Competent    [ ] Slightly Competent    [ ] Somewhat Competent    [ ] Competent
   [ ] Totally Competent

Emergency Nursing

5. When was the last time you provided direct patient care?
   [ ] More than 4 years ago
   [ ] Within the most recent 1-4 years
   [ ] Within the last year, but more than 6 months ago
   [ ] Within the last 6 months

6. What type(s) of triage experience and education have you had?
   [ ] I have not learned about triage yet
   [ ] Learned through military or civilian courses (i.e. EFMB, OAC, Medical Management
   of Chemical Casualties Course etc.)
   [ ] Learned through inservices, nursing courses, journals, handouts, etc..
   [ ] Practiced triage in an ED setting
[ ] Practiced triage in a field environment on real and/or moulaged patients.

7. How competent are you to calculate an IV drip without your calculator or drug book?  
   [ ] Not Competent  [ ] Have training, but no experience  [ ] Have training and minimal experience  [ ] Have training and moderate experience  [ ] Fully Competent

8. When was the last time you had to reconstitute medications, calculate dosages, and administer an IV medication? (check one)  
   [ ] More than 4 years ago  
   [ ] Within the most recent 1-4 years  
   [ ] Within the last year, but more than 6 months ago  
   [ ] Within the last 6 months

9. How competent are you to institute standing orders based on your ability to assess patients? For example, ordering X-rays, starting IV fluids, administering medications, etc. without immediate contact with a physician?  
   [ ] Not Competent  [ ] Have training, but no experience  [ ] Have training and minimal experience  [ ] Have training and moderate experience  [ ] Fully Competent

10. How competent are you to perform in a code/emergency situation?  
    [ ] Not Competent  
    [ ] Competent  
    [ ] Very Competent

11. Do you understand the concept of body surface area in relation to a burn patient and are you competent in calculating it?  
    [ ] No, Don't know what it is nor how to calculate it.  
    [ ] Heard of it before, but not able to calculate it.  
    [ ] Know a little about it and may be able to calculate it.  
    [ ] Understand it and probably could calculate it.  
    [ ] Understand it and can calculate it.

12. How competent are you when deciding which critically ill or injured patients get seen first?  
    [ ] Not Competent  [ ] Have training, but no experience  
    [ ] Have training and minimal experience  [ ] Have training and moderate experience  
    [ ] Fully Competent

13. Consider a situation if a doctor is not present. How competent are you in performing ACLS protocols?  
    [ ] Not competent  [ ] Have training, but no experience  
    [ ] Have training and minimal experience  [ ] Have training and moderate experience  
    [ ] Fully competent
14. How competent are you taking care of life threatening injuries?
   [ ] Not competent  [ ] Have training, but no experience
   [ ] Have training and minimal experience  [ ] Have training and moderate experience
   [ ] Fully competent

15. Are you competent in your IV skills?
   [ ] Yes  [ ] No

16. Could you in some detail describe the life-saving ABC principles?
   [ ] Yes  [ ] No

17. Do you feel competent to assess a multiple trauma patient?
   [ ] Yes  [ ] No

Check the number that indicates your level of competence on each of the patient situations listed below.

18. Care of patient with NBC injuries
   [ ] Not competent at all  [ ] Have training, but no experience
   [ ] Have training and minimal experience  [ ] Have training and moderate experience
   [ ] Fully competent

19. Ballistic missile injuries
   [ ] Not competent at all  [ ] Have training, but no experience
   [ ] Have training and minimal experience  [ ] Have training and moderate experience
   [ ] Fully competent

20. Recognition of tension pneumothorax
   [ ] Not competent at all  [ ] Have training, but no experience
   [ ] Have training and minimal experience  [ ] Have training and moderate experience
   [ ] Fully competent

21. Fluid resuscitation of a burn patient
   [ ] Not competent at all  [ ] Have training, but no experience
   [ ] Have training and minimal experience  [ ] Have training and moderate experience
   [ ] Fully competent

22. Universal blood donor protocol
   [ ] Not competent at all  [ ] Have training, but no experience  [ ] Have training and minimal experience
   [ ] Have training and moderate experience  [ ] Fully competent
23. Disease, non-battle injuries
   [ ] Not competent at all  [ ] Have training, but no experience
   [ ] Have training and minimal experience  [ ] Have training and moderate experience
   [ ] Fully competent

24. Use of field ventilator
   [ ] Not competent at all  [ ] Have training, but no experience
   [ ] Have training and minimal experience  [ ] Have training and moderate experience
   [ ] Fully competent

25. Airway management
   [ ] Not competent at all  [ ] Have training, but no experience
   [ ] Have training and minimal experience  [ ] Have training and moderate experience
   [ ] Fully competent

26. Implementing triage categories
   [ ] Not competent at all  [ ] Have training, but no experience
   [ ] Have training and minimal experience  [ ] Have training and moderate experience
   [ ] Fully competent

27. Clinical team leadership
   [ ] Not competent at all  [ ] Have training, but no experience
   [ ] Have training and minimal experience  [ ] Have training and moderate experience
   [ ] Fully competent

28. Caring for refugees
   [ ] Not competent at all  [ ] Have training, but no experience
   [ ] Have training and minimal experience  [ ] Have training and moderate experience
   [ ] Fully competent

29. Antepartum/postpartum care
   [ ] Not competent at all  [ ] Have training, but no experience
   [ ] Have training and minimal experience  [ ] Have training and moderate experience
   [ ] Fully competent

30. Field infection control
   [ ] Not competent at all  [ ] Have training, but no experience
   [ ] Have training and minimal experience  [ ] Have training and moderate experience
   [ ] Fully competent

31. Orthopedic nursing
   [ ] Not competent at all  [ ] Have training, but no experience
   [ ] Have training and minimal experience  [ ] Have training and moderate experience
[ ] Fully competent
32. Neurologic nursing
[ ] Not competent at all  [ ] Have training, but no experience
[ ] Have training and minimal experience  [ ] Have training and moderate experience
[ ] Fully competent

Physical Assessment

Please rate according to Level of Present Knowledge/Skill
33. Identify the components of a physical examination
[ ] Low  [ ] Somewhat low  [ ] Moderate  [ ] Nearly high  [ ] High

34. List the five examination techniques to perform a physical examination
[ ] Low  [ ] Somewhat low  [ ] Moderate  [ ] Nearly high  [ ] High

35. Perform a complete nursing assessment and interpret abnormal findings
[ ] Low  [ ] Somewhat low  [ ] Moderate  [ ] Nearly high  [ ] High

Section Two
Operational Nursing Competency

Consider this situation. The 4 limb electrodes of a cardiac monitor-recorder are attached to a patient and you have just obtained an EKG tracing in the field. You have been asked to obtain a 12 lead EKG on the patient. You have the following equipment and supplies: Field table; cardiac monitor; 4 metal limb electrodes attached to patient with holding straps; 1 suction cup electrode; 1 tube of electrode gel; 1 roll of recording paper; 1 box of alcohol pads; 1 patient on a hospital bed.

1. How competent are you to obtain a 12-lead EKG using the appropriate procedure and equipment describes above?  [ ] Not competent at all  [ ] Have training, but no experience
[ ] Have training and minimal experience  [ ] Have training and moderate experience
[ ] Fully competent

Consider this situation. You are providing patient care in a field environment and need to suction oropharyngeal secretions from a patient. You have the following equipment and supplies: Field table; 1 portable oropharyngeal suction apparatus; sterile patient suction tubing and suction catheter; 1 small container of water; 1 pair of clean gloves.

2. How long can the suction apparatus operate on internal battery pack?
[ ] 2 hours  [ ] 1 hour  [ ] 45 minutes  [ ] 30 minutes  [ ] 20 minutes

3. How many hours does it take for the internal battery pack to recharge when completely discharged?
[ ] 8 hours  [ ] 16 hours  [ ] 20 hours  [ ] 24 hours  [ ] 30 hours
4. In the field medical treatment facility or ward, the mode of electrical operation for the suction apparatus is AC power source
   [ ] True  [ ] False

5. In the ambulance or other evacuation vehicle, the mode of electrical operation for the suction apparatus is a DC power source
   [ ] True  [ ] False

6. For a patient on a litter, the mode of electrical power for the suction apparatus is a DC power source.
   [ ] True  [ ] False

Check the number that indicates your level of competence in these operational areas:

7. Evacuation Procedures
   [ ] Not competent at all  [ ] Have training, but no experience
   [ ] Have training and minimal experience  [ ] Have training and moderate experience
   [ ] Fully competent

8. Echelon of Care
   [ ] Not competent at all  [ ] Have training, but no experience
   [ ] Have training and minimal experience  [ ] Have training and moderate experience
   [ ] Fully competent

9. Reporting an unlawful act or conduct
   [ ] Not competent at all  [ ] Have training, but no experience
   [ ] Have training and minimal experience  [ ] Have training and moderate experience
   [ ] Fully competent

10. Field sanitation and hygiene
    [ ] Not competent at all  [ ] Have training, but no experience
    [ ] Have training and minimal experience  [ ] Have training and moderate experience
    [ ] Fully competent

11. DEPMEDS Setup
    [ ] Not competent  [ ] Have training, but no experience
    [ ] Have training and minimal experience  [ ] Have training and moderate experience
    [ ] Fully competent
Section Three
Soldier and Survival Skills (SS)

1. Check the number that best represents how familiar you are with the M-16 rifle.
   [ ] Not familiar   [ ] Somewhat familiar   [ ] Moderately familiar
   [ ] Quite familiar [ ] Totally familiar

2. Check the number that represents how familiar you are with the 9mm pistol
   [ ] Not familiar   [ ] Somewhat familiar   [ ] Moderately familiar
   [ ] Quite familiar [ ] Totally familiar

3. How competent are you in your ability to defend yourself and/or your patient(s) if called upon to do so?
   [ ] Not competent   [ ] Have training, but no experience
   [ ] Have training and minimal experience   [ ] Have training and moderate experience
   [ ] Fully competent

4. I am competent and confident in my ability to protect myself and my patients using the M40 mask and MOPP gear.
   [ ] Strongly disagree   [ ] Disagree   [ ] Neutral   [ ] Agree   [ ] Strongly agree

5. How competent are you in your ability to navigate using a map and compass?
   [ ] Not competent   [ ] Have training, but no experience
   [ ] Have training and minimal experience   [ ] Have training and moderate experience
   [ ] Fully competent

6. How competent are you in your ability to maintain your individual weapon in working order?
   [ ] Not competent   [ ] Have training, but no experience
   [ ] Have training and minimal experience   [ ] Have training and moderate experience
   [ ] Fully competent

7. How competent are you in your ability to perform your primary military specialty under adverse and/or prolonged field conditions?
   [ ] Not competent   [ ] Have training, but no experience
   [ ] Have training and minimal experience   [ ] Have training and moderate experience
   [ ] Fully competent

8. How competent are you in your ability to decontaminate yourself and your patients(s) using standard Army decontamination equipment?
   [ ] Not competent   [ ] Have training, but no experience
   [ ] Have training and minimal experience   [ ] Have training and moderate experience
   [ ] Fully competent
9. Check the number that represents how familiar you are with your status under the Geneva Conventions should you be captured by enemy forces.
   [ ] Not competent  [ ] Have training, but no experience
   [ ] Have training and minimal experience  [ ] Have training and moderate experience
   [ ] Fully competent

10. If you were captured, how competent are you in your ability to resist the enemy?
    [ ] Not competent  [ ] Have training, but no experience
    [ ] Have training and minimal experience  [ ] Have training and moderate experience
    [ ] Fully competent

11. Check the number that represents your familiarity with standard Army communications equipment. (i.e. field radio)
    [ ] Not familiar  [ ] Somewhat familiar  [ ] Moderately familiar
    [ ] Quite familiar  [ ] Totally familiar

Section Four - A
Personal and Physical Readiness (PPR)

1. Check the box that most closely represents your last APFT score.
   [ ] <180  [ ] 180-220  [ ] 221-240  [ ] 241-269  [ ] 270-300+

2. Check the box which represents how long ago it was that you had a dental exam.
   [ ] >24 mos.  [ ] 19-24 mos.  [ ] 13-18 mos.  [ ] 6-12 mos.  [ ] <6 mos.

3. If indicated do you have a family care plan?
   [ ] Yes  [ ] No  [ ] Not Applicable

4. Do you have a physical profile?
   [ ] Yes  [ ] No

5. If yes to the above question, does your profile prevent you from completing your duty?
   [ ] Yes  [ ] No  [ ] Not Applicable
Section Four - B
Psychosocial Readiness (PR)

Family

1. Check the number that best describes the quality of your current family support system. (i.e. family support group, friends or family)
   [ ] Poor  [ ] Fair  [ ] Good  [ ] Very good  [ ] Excellent

2. If you are deployed, will the same family support system in the above question be available?
   [ ] yes  [ ] no

3. Have you ever been separated for more than 6 months from your family/significant other?
   [ ] Yes[ ] No

4. If yes to the above question, describe your families overall response to your separation.
   [ ] Poor  [ ] Fair  [ ] Good  [ ] Very good  [ ] Excellent  [ ] NA (Never separated)

Legal

5. Do you have a current will?
   [ ] yes  [ ] no

6. Do you have a current power of attorney?
   [ ] yes  [ ] no

7. Do you have any pending legal matters, i.e. divorce or other legal problems?
   [ ] yes  [ ] no

Occupational

8. Describe your current working relationship with co-workers in your deployment unit.
   [ ] Poor  [ ] Fair  [ ] Good  [ ] Very good  [ ] Excellent  [ ] Not Applicable

9. Describe your overall feeling about your past deployment experience
   [ ] Poor  [ ] Fair  [ ] Good  [ ] Very good  [ ] Excellent  [ ] Never Deployed
Current Stressors and Coping Strategies

Deployment brings with it stress and challenge which tend to compound pre-deployment stressors. How much stress are you experiencing in the following areas:

10. Main work
[ ] No stress [ ] Somewhat stressed [ ] More than somewhat stressed
[ ] Quite stressed [ ] Very much stressed

11. Family
[ ] No stress [ ] Somewhat stressed [ ] More than somewhat stressed
[ ] Quite stressed [ ] Very much stressed

12. Finances
[ ] No stress [ ] Somewhat stressed [ ] More than somewhat stressed
[ ] Quite stressed [ ] Very much stressed

13. Other
[ ] No stress [ ] Somewhat stressed [ ] More than somewhat stressed
[ ] Quite stressed [ ] Very much stressed

14. Do you know how to access emotional support while deployed?
[ ] Yes [ ] No

15. To which of the following would you turn for coping with stress? (check ALL that apply)
[ ] Tobacco
[ ] Physical Exercise
[ ] Relaxation/Meditation Techniques
[ ] Talking with Friends
[ ] Religious Faith

16. Do you know how to access mental health services while deployed?
[ ] Yes [ ] No

To what extent are you prepared for:

17. Death, dying, and carnage
[ ] Not ready at all [ ] Somewhat ready [ ] Moderately ready [ ] Mostly ready
[ ] Totally ready

18. Your own possible death
[ ] Not ready at all [ ] Somewhat ready [ ] Moderately ready [ ] Mostly ready
Section Five
Leadership and Administration Support (LAS)

Administration

1. If you were deployed with a unit that you are not currently assigned or PROFIS to, you would understand the set up, functions, and all of the areas that fall under the command structure of the TOE unit.
   [ ] Strongly Agree [ ] Agree [ ] Neutral [ ] Disagree [ ] Strongly Disagree

2. If you are a single parent or dual military, IAW (in accordance with) AR 600-20, you are required to have a Family Care Plan. If you were called today and given notification that you were to deploy next week, how confident are you that you could activate and make your Family Care Plan work for the entire deployment (up to 9 months)
   [ ] Totally confident
   [ ] Confident
   [ ] Somewhat confident
   [ ] Unsure that it would work for a long period of time (over 6 months).
   [ ] Unsure it would work as set up now.
   [ ] Not confident at all
   [ ] Not applicable; I am not a single parent or dual military
Leadership

3. Check the box that represents how you rate your deployment unit first-line leader's knowledge and concern for the soldiers as described in the leader's principle: "Know your soldiers and look out for their well-being"
   [ ] Very knowledgeable and concerned
   [ ] Somewhat knowledgeable and concerned
   [ ] Not knowledgeable and unconcerned
   [ ] Not applicable (I am not PROFIS / I have never met my deployment unit first-line leader / I am not assigned to a deployment unit)

4. Check the box that represents how you would rate your deployment unit first-line leader's acceptance of responsibility to ensure that safe, tough, realistic training was conducted which adhered to the highest standards, habits and discipline.
   [ ] High sense of responsibility
   [ ] Moderate sense of responsibility
   [ ] Low sense of responsibility
   [ ] Not applicable (I am not PROFIS / I have never met my deployment unit first-line leader / I am not assigned to a deployment unit)

5. Check the box that represents how you rate your deployment unit first-line leader's ability to keep you informed.
   [ ] Leader keeps me very well informed
   [ ] Leader keeps me fairly well informed
   [ ] Leader does not keep me not informed at all
   [ ] Not applicable (I am not PROFIS / I have never met my deployment unit first-line leader, / I am not assigned to a deployment unit)

Section Six
Group Integration and Identification (GII)

1. Check the number that represents your ability to adjust to crowded and coed sleeping quarters while deployed.
   [ ] Low ability to adjust  [ ] Some ability to adjust  [ ] Moderate ability to adjust
   [ ] Good ability to adjust  [ ] High ability to adjust

2. Check the box that represents the amount of days you have had the chance to train with your deployment unit in the last 12 months.
   [ ] Non  [ ] 1 day  [ ] 2-6 days  [ ] 7-14 days  [ ] >14 days
   [ ] NA (I am not PROFIS / I am not assigned to a deployment unit)
3. How familiar are you with your deployment unit's mission, vision, and values?
[ ] Very Familiar   [ ] Familiar       [ ] Neither/Nor   [ ] Somewhat Familiar
[ ] Not Familiar at All
[ ] NA (I am not PROFIS / I am not assigned to a deployment unit)

4. How familiar are you with your role/duty assignment within your deployment unit?
[ ] Very Familiar   [ ] Familiar       [ ] Neither/Nor   [ ] Somewhat Familiar
[ ] Not Familiar at All
[ ] NA (I am not PROFIS / I am not assigned to a deployment unit)
August 31, 2001

15111 Oakliff
San Antonio, TX 78232-4617

Felecia M. Rivers
CPT, AN
1048 Graysville RD
Chattanooga, TN 37421

Dear CPT Rivers,

I would be very happy for you to utilize the Readiness Estimate and Deployability Index in your research study "Identifying Competency Skills of PROFIS Personnel". I also grant you permission to manipulate the demographic data to fit your study population.

I realize your research study is in partial completion of your master's degree in Nursing Education at University of Tennessee, Chattanooga. I wish you all the best in your studies. If I can be of any farther assistance, please do not hesitate to contact me.

Sincerely,

Carol Reineck, PH.D., RN
COL. USA
Appendix M

Reineck, Carol REINECK@uthscsa.edu
Thursday, November 01, 2001 10:13 AM
'Felecia Rivers' frivers214@home.com
RE: Regarding READI Tool

Felicia,
Yes you may certainly convert to electronic format. LTC Dremsa and I are working on shortening the READI and also converting to electronic format, and we'll submit a grant too.
For your grant, just follow the guidelines to the "t". Avoid jargon and acronyms. Be clear. Don't leave any questions unanswered. Say what you're going to do, and summarize what you say. Use headings for clarity. Create confidence that you can do the job.

We would want to make sure our two grants don't overlap too much. The one I am working on will abbreviate the READI and adapt it for Navy, and create a website where it can be accessed.
What is the main aim that you have for your grant?
Carol
-----Original Message-----
From: Felecia Rivers [mailto:frivers214@home.com]
Sent: Thursday, November 01, 2001 6:51 AM
To: Carol Reineck
Subject: Regarding READI Tool

Dear COL Reineck,
I was considering converting the READI into an electronic format for my research study. It would increase anonymity and be a much faster way to distribute the tool. Perhaps it would increase the return rate of the survey. Would you be agreeable to the conversion? I have great support from the nursing informatics section here who would assist me in completing this if you agree.

I have been in contact with LTC Dremsa. She stated you two were also working together regarding the READI. In fact, I believe she was the one who mentioned the idea of converting it an electronic version.

Also, I am in the process of completing the proposal for the TriService grant. If you have any advice you would like to share regarding the process, I would certainly appreciate it, as this is my first attempt.
Felecia Rivers,
CPT, AN
Graduate Student
University of Tennessee at Chattanooga
Appendix N

Core Competency Assessment

Department of Nursing, DACH

Registered Nurse (AN)
# Core Competency Assessment

**Department of Nursing, DACH**

**Registered Nurse**

**COMPETENCY STATEMENT**

1. Provides nursing care for the patient in a safe environment.

**SELF ASSESSMENT**

**PERFORMANCE CRITERIA**

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**Comments:**

**SELF ASSESSMENT:** 1 = Never, 2 = Rarely done, 3 = Occasionally done, 4 = Routinely done

**Method of Verification:** D = Demonstration, W = Written Exam, O = Observation, C = Charting, D = Documentation, V = Verbal, O = Other
COMPETENCY STATEMENT #1 cont. Provides nursing care for the patient in a safe environment.

### SELF ASSESS

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<td>3. Implements the BACH Safety Plan as appropriate.</td>
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<td>a. Conducts risk assessment prior to using any equipment.</td>
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<td>b. Reports safety issues/violations to the appropriate person/department.</td>
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<td>c. Recognizes hazards specific to the work area.</td>
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<td>d. Locates the MSDS Manual and can explain contents.</td>
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<td>4. Implements the BACH Fire Plan.</td>
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<td>a. Demonstrates the fire evacuation plan.</td>
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<td>b. Locates and simulates use of fire extinguisher and alarm.</td>
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<td>e. Locates and simulates the use of oxygen shut-off valve.</td>
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<td>5. Implements the BACH Infection Control Plan</td>
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<td>a. Isolates patients with airborne, contact, droplet and multi-drug resistant infections.</td>
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**Comments:**

*SELF ASSESSMENT: 1 = Never/Rarely done, 2 = Occasionally done, 3 = Routinely done.
Method of Verification: D = Demonstration, W = Written Exam, O = Observation, C = Charting/Documentation, V = Verbal, O/ = Other.*
g care for the patient in a safe environment.

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One: F = Routinely done

Observation C = Charting/Documentation V = Verbal DT = Other