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Navy Nurses' Experiences during Operation Unified Assistance Aboard the USNS MERCY: A Grounded Theory Study

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NAVY NURSES' EXPERIENCES DURING OPERATION UNIFIED ASSISTANCE ABOARD THE USNS MERCY: A GROUNDED THEORY STUDY

by

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Abstract

On December 26, 2004, the most powerful earthquake in 40 years erupted under the Indian Ocean triggering a deadly tsunami that devastated 11 Asian and African countries and killed more than 280,000. The US Navy responded through Operation Unified Assistance (OUA). In a historic first on the hospital ship USNS MERCY, the U.S. Navy deployed one team with members from the Navy, the U.S Public Health Service, a non-government organization (NGO), and a civilian mariner crew to provide humanitarian aid. Despite these efforts, there is a dearth of scholarly research work published on nurses' experiences during the disaster. The purpose of this original study was to explain Navy nurses' preparation, practice, and collaboration aboard the USNS MERCY during OUA. The study's purpose was carried out through a grounded theory methodology. IRB approval was granted by the Naval Medical Center San Diego and the University of San Diego. A purposive convenience sample of Navy nurses was recruited through advertisements and word of mouth. Participants were Navy nurses who took part in OUA on the USNS MERCY. Sample size currently was 11. Interviews took place from July 2006 to October 2006. Data were collected from interviews, observations, field notes, memos, and a demographic tool. Data were categorized, coded, and compared to incoming data as is fundamental to grounded theory's constant comparative method. Data were analyzed using Strauss & Corbin's open coding, axial coding, and selective coding methods. Demographic data were analyzed through descriptive statistics. A theoretical model was developed to illustrate how Navy nurses experienced the readiness of Operation Unified Assistance through the roles they served and the relationships they encountered. Readiness was the overarching theme and was instrumental for the participants during their journey from packing their seabags, to steaming west, to engaging in humanitarian nursing. The participants' mindsets, knowledge, skill sets, and coping mechanisms

contributed to their readiness. This readiness was significant in helping the participants overcome challenges and difficulties they faced during the phases of the mission. The participants recounted how they responded and reacted to roles as a Navy sailor, Navy nurse, Naval Officer, and Ambassador of the U.S. The participants also shed light on their relationships with others, highlighting how they communicated with patients and their families, translators, NGO nurses from Project Hope, and hospital corpsmen. Overall, the participants fondly recounted their readiness to meet the mission and accomplish tasks. To be prepared for future like missions, the participants recommended: current proficiency in transcultural medical-surgical nursing for patients and families of all ages; public health education skills; and primary care skills. Ultimately, a program of research in this area will involve an integration of both qualitative and quantitative studies, addressing the intersection of the needs of registered nurses and indigenous peoples alike. Future studies on moral distress, deployment coping mechanisms, and use of pediatric and mental health advance practice nurses to address nursing stressors unique to humanitarian missions.

Dedication

This study is dedicated to all Navy Nurses deployed during Operation Unified Assistance aboard the USNS MERCY.

Preface

I am obligated to state the following disclaimer, "The views expressed in this work are those of the author and do not reflect the official policy or position of the Department of the Navy, Department of Defense, or the United States Government."

That said, I thank God for all that He has given me. What an awesome blessing it has been to pursue my doctoral education. In time and with His guidance, I carved out my splinter of research from the oh so big block of nursing science. I am eternally grateful for the gracious support of my kind, loving husband Mike. Throughout this process, he has put his needs on hold. From the cluttered garage to my preoccupation with "doing my paper", he really held me and our family together. I am also appreciative for the time I have been allowed to spend growing as a mother and as a nurse scientist. The Navy Nurse Corps has sponsored me through two graduate degrees and I am humbled by those opportunities. I will do my best to honor the Corps with a rich trajectory of research. I also commit to getting junior nurses excited about research and vow to help Navy nurses advance their clinical practice.

I have grown with my sons Andrew and Daniel. How precious it has been to see them learn and laugh. What I enjoyed the most was watching them get to know their grandparents. My parents Julian and Merian came from war-torn poverty of the Philippines and gave me a life free from want. "Salamat Po" to them for their sacrifices, Godly family values, and earnest drive for advanced education - ours is the American Dream. To my dear dad Denis and mom Terry Bell, you have been more than just parents to me - you have become dear friends. For my siblings Emily, Mario and family, you inspire me every day. For my funny friends Anita, Grace, Lisa, Deb, and those Doctoral Divas - thanks for keeping me focused on what is important.

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I am in awe of Dr. Linda Urden. She is truly brilliant and all that a nursing scientist should be. I appreciate her presence and involvement with my work. Her patient feedback and approachability have been invaluable to me. Great are the lessons you have taught me. I have also learned much from Dr. Patricia Roth. Throughout my graduate degrees at USD, Dr. Roth has been a gentle and gracious force. Strong and caring, she is a remarkable lady (and I say that with great admiration). With the utmost diplomacy and poise, she epitomizes dignity.

Lastly, I thank the Navy nurses I have worked with through the years. Those who help me get this Navy scholarship, especially those Navy researchers who have pioneered the way. Thank you for coming back for me and bringing me along. One day, I hope to feel as worthy as you say I am.

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CHAPTER 1

Introduction

More than ever before, we are seeing a "marked increase in the number of natural disasters [floods, droughts, earthquakes, hurricanes] along with greater levels of loss of life, property, and material damage" (United Nations' Office for the Coordination of Humanitarian Affairs [UNOCHA], 2006, para. 2). In the past 10 years, natural disasters have been responsible for severe humanitarian crises and have claimed the lives of close to 600,000 people worldwide (UNOCHA, 2005). The damages associated with natural disasters are worsened when disasters hit under-developed countries that are already precariously vulnerable - burdened with extreme poverty, dense populations, environmental degradation, less developed infrastructure, and inadequate emergency preparedness (UNOCHA, 2006).

According to the United Nations' Office for the Coordination of Humanitarian Affairs (2005), nearly 50 million people today are displaced by war, human rights violations, and natural and environmental disasters in over 50 countries. "The immediacy of human need and the severity of human suffering resulting from both natural disasters and conflicts warrants rapid and coordinated global response" (UNOCHA, 2005, para. 2). Survival of disaster-stricken individuals depends on "emergency shelter, food, health care, immunization, clean water, and sanitation facilities, while education and economic opportunities enable their longer-term recovery" (UNOCHA, 2005, para. 2).

On December 26, 2004, a natural disaster of unparalleled magnitude struck 11 Asian and African nations bracketing the Indian Ocean. On that fateful day, the most powerful earthquake

in 40 years erupted under the Indian Ocean and triggered a deadly tsunami, which killed more than 280,000, displaced more than one million, and affected the lives of nearly five million more (UNOCHA, 2005; World Health Organization, 2005). Although the tsunami was not the biggest in recorded history, its effects were the biggest ever because it hit vulnerable underdeveloped countries (UNOCHA, 2006). The 9.0 magnitude earthquake and subsequent giant waves left nations ravaged and devastated - many of which had never before experienced such an immensely lethal disaster. Nearest to the epicenter of the originating quake, Aceh Province was among the hardest hit, with more than 107,000 lost lives (Kennedy & Roush, 2005). Banda Aceh, Sumantra, Indonesia was one of the region's most devastated cities (Smith, 2005).

People from around the globe responded to provide relief and humanitarian aid after the 2004 earthquake and subsequent tsunami disaster. "Unprecedented media coverage triggered a worldwide outpouring of empathy, financial aid, and pledges of aid; mobilization of resources; and concerted action from governmental and nongovernmental organizations and international nation agencies" (Tharyan, Clarke, & Green, 2005, para. 1). Many consider the relief efforts to be the largest global humanitarian effort of our generation (Mills, 2005). As part of the global relief response, the United States (U.S.) Navy also provided foreign humanitarian assistance in the wake of the tsunami disaster; within a week of this disaster, the United States Naval Ship (USNS) MERCY was deployed to Banda Aceh as part of Operation Unified Assistance (OUA) relief efforts. Together for the first time aboard a U.S. Navy vessel, healthcare teams from the U.S. Navy, U.S. Public Health Services, and a nongovernmental organization (NGO) joined the U.S. MERCY's civilian mariner crew to care for the injured and sick (Navy Newstand, 2005b).

Despite the overwhelming global response to the 2004 Indian Ocean earthquake and tsunami disaster, to date, no scholarly research work that focuses upon nurses' involvement in

the relief efforts had been published. An extensive review of the literature reveals that few research studies examined natural disaster relief efforts from a nursing perspective. Even fewer examined nurses' preparation, clinical practice, and collaboration required to provide competent care to the disaster stricken. Although disasters are occurring in increased frequency around the globe, it has not been readily known how nurses contribute to the care of vulnerable survivors in the recovery phase of a natural disaster. This study takes a definitive step towards filling this gap in nursing knowledge by exploring how U.S. Navy nurses experienced and contributed to the care of the tsunami disaster stricken aboard the USNS MERCY hospital ship.

Significance of the Study

The understanding of the Navy nurses' experiences in OUA aboard the USNS MERCY is significant because the deployment was the first of its kind. In the light of ever-shrinking resources and call for global cooperation, the joint mission will likely not be the last of its kind. In the past, the U.S. military has long partnered with NGOs and others to provide humanitarian aid and disaster relief in many missions known as military operations other than war (MOOTW). Since November 2005, the Department of Defense (2005) has categorized the U.S. military's involvement in humanitarian disaster relief efforts as military support to stability, security, transition, and reconstruction (SSTR) operations. Stability operations are now considered a core U.S. military operation that "shall be given priority comparable to combat operations" (Department of Defense, 2005, p. 2). The goal of these stability operations is to "help establish order that advances U.S. interests and values...[and] provide the local populace with security, restore essential services, and meet humanitarian needs" (Department of Defense, 2005, p. 2). Future deployments aboard the U.S. Navy hospital ships (USNS MERCY and USNS Comfort)

with military-civilian (i.e., NGO) teams are certain (W. B. Poss, personal communication, March 6, 2006).

New information has not been yet documented in the literature regarding how the U.S. Navy has completed this specific mission aboard a hospital ship with NGOs. Absent also in publicly accessible nursing literature is how Navy nurses practice, train, care, and work together with NGOs in a humanitarian setting. Beyond generic lessons learned, there is an opportunity to learn about these pioneer Navy nurses' experiences as they prepared for, trained for, and collaborated with NGOs to deliver patient care to tsunami survivors aboard a U.S. Navy hospital ship. This new knowledge is significant to the global community of nurses because it has the potential to improve future worldwide relief efforts aboard U.S. Navy hospital ships and other platforms across many disciplines. This study is aimed at helping understand and improve the health of some of the world's most vulnerable citizens: those living in disaster-prone communities.

Background

U.S. Military and Humanitarian Assistance

The U.S. military has played a major role in providing humanitarian assistance world-wide. The purpose of foreign humanitarian assistance has been to "relieve or reduce the results of natural or man-made disasters or other endemic conditions, such as human suffering, disease, or privation that might present a serious threat to life or that can result in great damage to or loss of property" (Joint Publication, Joint Chiefs of Staff, 3-07.6, 2001, p.I-1). Because the U.S. military is uniquely equipped, structured, and trained to rapidly respond, it has a long proud tradition of providing humanitarian assistance and disaster relief overseas. In the past, U.S. military forces have participated in humanitarian assistance efforts: the Kurdish crises in northern Iraq (1991),

famine and civil strife in Somalia (1992-1993), peacekeeping efforts in Croatia (1994), support to the humanitarian crisis in Rwanda (1994), migration of Cuban and Haitian asylum seekers (1994), nation-building efforts in Bosnia (1996), and flood relief in Mozambique (2000), to name a few (Sharp, Yip, and Malone, 1994; Samuels, 1997; Joint Chiefs of Staff, 2001). Additionally, military medical teams have provided humanitarian relief to the victims of earthquakes in Peru (1970) and Nicaragua (1972); tropical cyclones in East Bengal (1970), Sri Lanka (1978), and Bangladesh (1991); flooding in Sudan (1988); and volcano eruption in the Philippines (1990) (Sharp et al., 1994). Since the end of the Cold War, there has been a renewed, albeit controversial, emphasis placed on military humanitarian interventions (Sharp et al., 1994; Burkle, Petersen, Frost, Lillibridge, & Greco, 1996; Ryals & Baker, 1996; Samuels, 1997; Drifmeyer & Llewellyn, 2003). According to the Chairman of the Joint Chiefs of Staff (2001) publication entitled "Joint Tactics, Techniques, and Procedures for Foreign Humanitarian Assistance": "it is sometimes in the best interests of the United States and its allies to deploy U.S. forces to provide humanitarian assistance to those in need. In addition, humanitarian and political considerations are likely to make humanitarian assistance operations commonplace in years ahead" (Joint Chiefs of Staff 3-07.6, 2001, p. vii).

In November 2005, the Department of Defense secured the U.S. military's future in humanitarian efforts by classifying these missions as stability, security, transition, and reconstruction operations intended to "lead to sustainable peace while advancing U.S. interests" (Department of Defense, 2005, p. 2). Recognizing its past efforts and certain future in foreign humanitarian assistance, the U.S. military's foreign humanitarian assistance efforts are meant to be limited in duration and scope and supplement the efforts of other U.S. Government

organizations and host nation civil authorities and private organizations (Joint Chiefs of Staff 3-07.6, 2001).

USNS MERCY's Mission

The USNS MERCY hospital ship (home ported in San Diego, CA) and its sister ship the USNS Comfort (home ported in Baltimore, MD) have two missions. The primary mission is to "provide rapid, flexible, and mobile acute medical care to Marine, Army, and Air Force units deployed ashore, and to U.S. Navy amphibious task forces and battle groups afloat. The secondary mission is to provide disaster or humanitarian relief" (Department of the Navy, 2004, p. EX-1). Both hospital ships are maintained in a reduced operating status (ROS) by a civilian mariner crew (responsible for the ship's security and maintenance), and a skeleton Navy crew (responsible for the readiness and maintenance of the ship's medical treatment spaces and corresponding supplies and equipment) - (Department of the Navy, 2004). Upon receipt of an activation order, both hospital ships must be ready to deploy within five days. The mission determines how many patient beds are activated, which, in turn, determines how many medical and nursing staff are deployed to augment the ROS crew (Department of the Navy, 2004; Boren, Forbus, Bibeau, McKenzie, & McKinsey, 2003). When activated to full operating status (FOS), the hospital ships have a 1,000-bed total patient capacity and the following patient care facilities: operating rooms, 12; intensive care wards, 80 beds; recovery wards, 20 beds; intermediate care wards, 280 beds; light care wards, 120 beds; and limited care wards, 500 beds (Military Sealift Command, 1997). Depending upon the mission at hand, the hospital ships may be activated to 250, 500, or 1,000 beds. When activated to FOS, the USNS MERCY has the following major departments and facilities: casualty reception, radiological services, laboratory services, central sterile receiving, medical supply and pharmacy, physical therapy and burn care, dental services,

optometry/lens laboratory, morgue, laundry, and oxygen producing plants (Military Sealift Command, 1997).

The USNS MERCY is one of the operational platforms to which the Bureau of Naval Personnel assigns U.S. Navy nurses. Once assigned to the USNS MERCY as an operational platform, Navy nurses are assigned to work at the Naval Medical Center San Diego before they are mobilized (Boren et al., 2003). To ensure operational readiness, Navy nurses train through clinical courses, shipboard courses, and training exercises aboard the USNS MERCY (Boren et al., 2003). Clinical courses usually include training specific to the USNS MERCY's primary combat care mission such as combat trauma care, mass casualty care, and intensive care nursing. Shipboard duty courses include fire fighting, damage control, and defense against chemical, biological, and radiological attacks (Boren et al., 2003). Training exercises for the USNS MERCY (MERCEX) are held quarterly and include ward-specific competency assessments in the use of equipment and specific skills performance (Boren et al., 2003). Training is culminated in routine exercises with the U.S. Navy and Marine Corps fleet. The USNS MERCY's ROS and some of the FOS crew participate in operation Kernel Blitz with the fleet and simulate the receipt and processing of mass casualties - a probable occurrence in combat support (Boren et al., 2003).

USNS MERCY's History

The first U.S. hospital ships were commissioned in the 1860s, and they served as hospitals for chronically ill and war injured sailors (Hooper, 1993). During World War I, the hospital ships served as ambulance ships, and during World War II, they provided acute care for combat casualties (Hooper, 1993). Through the Korean and Vietnam wars, the hospital ships continued to evolve into trauma centers (Hooper, 1993). Today's hospital ships, the USNS MERCY and USNS Comfort, have completed many missions. The USNS Comfort has been

activated for Operation Sea Signal to provide medical services during Haitian migrant processing (1994); Operation Uphold Democracy to provide medical care to Cuban and Haitian refugees (1994); Operation Noble Eagle to provide logistics support and services in New York City after the terrorist attacks of September 11, 2001 (2001); Operation Iraqi Freedom to provide combat medical support (2005); and relief to Hurricane Katrina survivors and outreach workers (2005) (Boren et al., 2003; Hooper, 1993). Both hospital ships were activated in support of Operations Desert Shield and Storm for combat casualty support.

The current USNS MERCY hospital ship was built in 1976 as an oil tanker but was commissioned as a hospital ship in November of 1986 (Military Sealift Command, 1997). Since its commissioning, the USNS MERCY has completed two humanitarian assistance missions – one to the Philippines and South Pacific in 1987 and one OUA in 2005. Still another humanitarian assistance deployment was scheduled for April 2006. The USNS MERCY's humanitarian cruise to the Philippines lasted from February 27, 1987 to July 13, 1987 and included ports in the Philippines, Papua, New Guinea, and Fiji (Military Sealift Command, 1997; Hooper, 1993). The purpose was to "generate popular goodwill and support for the Philippine government provide operational familiarization and medical training for the ship's crew; verify the surgical and medical care capabilities; and identify shipboard equipment and design problems requiring correction" (Hooper, 1993, p. 622). The staff included U.S. military - active duty and reserve personnel from all branches, U.S. Public Health service personnel, MSC civilian mariners, and medical providers from the Philippines' military (Military Sealift Command, 1997). The USNS MERCY staff provided treatment to over 62,000 outpatients and nearly 1,000 inpatients during visits to seven ports in the Philippines and seven ports in the South Pacific (Military Sealift Command, 1997).

The USNS MERCY and the USNS Comfort are floating tertiary-care centers capable of providing a wide variety of support measures. "This support ranges from very basic to very sophisticated medical/surgical care both onboard and ashore. Hotel services can be provided for relief workers assigned to the relief effort...or to the victims of a disaster...This platform can [also] work alone or in concert with shore-based activities to provide a broad range of support services in homeland defense" (Department of the Navy, 2004, p. 2-2). According to the Department of the Navy (2004), while underway, the ship has the ability to make 300,000 gallons of fresh water daily - an asset when infrastructure has been disrupted and public water supply is lost. The only limitation for the hospital ship is that it must be in deep-water at all times and transportation to and fro must be arranged (Department of the Navy, 2004). In 2003, the per-diem cost of hospital ship operations was approximately $68,000 - depending on the location and mission at hand (Department of the Navy, 2004). Overall, the hospital ship is a "flexible, capable, and unique platform - flexible in its ability to respond to different mission requirements and scenarios, capable in the breadth and depth of medical services offered, and unique as a floating mobile hospital" (Department of the Navy, 2004, p. EX-2).

Operation Unified Assistance

On January 5, 2005, the USNS MERCY departed San Diego as part of Operation Unified Assistance (OUA) to provide relief to those devastated by the earthquake and tsunami in Indonesia. The USNS MERCY's health care staff was augmented with staff from an NGO called "Project Hope." The combined staff prepared to support 250 patients and to treat cases of infectious diseases, dehydration, and malnutrition (Navy Newstand, 2005; Boren et al., 2003). Initially, approximately 275 Navy medical and medical support staff, along with 64 civilian mariners, sailed the hospital ship from San Diego. Later in the month, the NGO and remaining

military personnel boarded the ship; the NGO staff numbered approximately 200 health professionals over two rotations, and they helped with the tsunami disaster relief phase of the deployment (Navy Newstand, 2005).

During this phase, from February 6 to March 16 of 2005, the combined USNS MERCY staff treated over 9,500 patients and performed over 19,500 medical procedures in its Banda Aceh mission (Navy Newstand, 2005). While heading for homeport in San Diego, California, the USNS MERCY's team treated more than 8,000 patients in six days in visits to Alor, Indonesia and Dili, East Timor (Navy Newstand, 2005). On March 28, duty once more called upon the USNS MERCY staff in the form of an 8.7 magnitude earthquake which hit Nias, an island off the coast of Sumatra. The USNS MERCY turned around and headed back to moor off the coast of Nias and deliver another 123 surgeries and 19,000 medical procedures (Navy Newstand, 2005). After sailing 36,000 nautical miles, the USNS MERCY team was welcomed home on June 8, having made naval history and setting the standard for future humanitarian assistance and disaster relief deployments (Navy Newstand, 2005). In total, the USNS MERCY staff completed four missions in a five month deployment. Operation Unified Assistance (OUA) consisted of four phases: disaster relief for tsunami and earthquake victims in Banda Aceh, Indonesia (OUA I: 1/5/05-3/16/05); humanitarian assistance for the citizens of Alor, Indonesia and Dili, East Timor (Theater Security Cooperation Program (TSCP) I: 3/16/05-3/28/05); disaster relief for earthquake victims in Nias Island (OUA II: 3/28/05-4/30/05); humanitarian assistance for people in Madang Province, Papau New Guinea (TSCP II: 5/1/05-5/20/05); then transport to home port (in San Diego on 6/8/05) (J.B. Comlish, personal communication, October 11, 2005).

U.S. Navy Nurses and Humanitarian Missions

Military nurses have a distinguished history and promising future of becoming mobilized to provide humanitarian relief. Specifically, U.S. Navy Nurse Corps Officers are part of a multidisciplinary Navy Medicine team which "must be flexible enough to perform a combat services support mission, a global war on terrorism mission, a homeland security mission, a humanitarian mission, or a nation-building mission...[and be] properly trained and flexible enough to do one mission one day and another mission the next" (Arthur, 2005, p.1). The U.S. Navy's Surgeon General's goal is "to have the right people, with the right skills, in the right place, at the right time to fulfill our health care mission" (Arthur, 2005, p.1). The Surgeon General implores the entire Navy Medicine team - active and reserve personnel, civilian, and contractors - to continue to perform superbly and with greater efficiency by examining what operational knowledge, skills, abilities, and tools are required to fulfill the health mission (Arthur, 2005). This study was aimed at examining the operational knowledge, skills, abilities, and tools needed by Navy nurses to enable them to perform with excellence and with greater efficiency in humanitarian and disaster relief missions.

Statement of the Problem

In light of limited, ever-shrinking resources and a subsequent demand for efficiency, Navy Medicine will be called upon again to carry out humanitarian missions aboard the USNS MERCY with NGO support. As such, fulfilling the humanitarian mission requires the right Navy nurses with the right skills. Since the experiences of Navy nurses aboard the USNS MERCY during Operation Unified Assistance have thus far been not been published, an understanding of these experiences will contribute specifically to Navy nursing's body of knowledge in humanitarian operations - and globally - to the nursing fields' body of knowledge in disaster

relief efforts. While nurses deployed to disasters around the world often face uncertain challenges, what is certain is that "it is essential to prepare them fully by building on past experience and skills adapted to specific environments" (Davies, Deeny, & Raikkonnen, 2003, p. 350). This study was significant because it will lead to improved understanding, preparation, and care of the vulnerable in disaster-stricken zones during humanitarian assistance offered by the global, caregiving community.

Purpose of the Study

The purpose of this study was to explain Navy nurses' preparation, practice, and collaboration aboard the USNS MERCY in OUA - a humanitarian assistance and disaster relief deployment. The long-term objective was to construct a theoretical model founded in nurses' descriptions of their experiences in OUA for use among nurses deploying in support of humanitarian assistance and disaster relief efforts in the future.

Research Questions

This study investigated the experiences of U.S. Navy nurses during Operation Unified Assistance aboard the USNS MERCY. The following research questions were used:

1. How did Navy nurses experience Operation Unified Assistance aboard the USNS MERCY?
2. How did Navy nurses prepare for Operation Unified Assistance?
3. How did Navy nurses train for Operation Unified Assistance?
4. How did Navy nurses practice nursing during Operation Unified Assistance?
5. How did Navy nurses work with NGO Project Hope during Operation Unified Assistance?

Specific Aims

The specific aims of the study were:

Aim 1: Explore and obtain descriptions of U.S. Navy nurses' experiences in preparing for deployment, training for the mission, caring for patients, and collaborating with NGOs during Operation Unified Assistance aboard the USNS MERCY.

Aim 2: Analyze and present these descriptions using the constant comparative method.

Aim 3: Develop a grounded theory for deployment for humanitarian assistance and/or disaster relief missions.

Theoretical Definitions

Disaster

Disaster is defined as "an emergency situation posing significant danger to life and property that results from either an act of nature (such as a flood, drought, fire, hurricane, earthquake, volcanic eruption, or epidemic) or an act of man (such as a riot, violence, civil strife, explosion, fire, or epidemic)" (Joint Chiefs of Staff 3-07.6, 2001, p. GL-5-6).

Disaster Nursing

According to the Japan Society of Disaster Nursing (2002), disaster nursing is: "the systematic and flexible utilization of knowledge and skills specific to disaster-related nursing, and the promotion of a wide range of activities to minimize the health hazards and life threatening damage caused by disasters in collaboration with other specialized fields" (as cited by Jennings-Sanders, Frisch, & Wing, 2005, p. 80).

Disaster Relief

Disaster relief, defined by the Joint Chiefs of Staff (2001) is: "prompt aid that can be used to alleviate the suffering of foreign disaster victims. It usually includes humanitarian

services and transportation; the provision of food, clothing, medicine, beds, and bedding; temporary shelter and housing; the furnishing of medical materiel and medical and technical personnel; and making repairs to essential services" (Joint Chiefs of Staff 3-07.6, 2001, p. GL-5).

Humanitarian Assistance

The Joint Publicatioin (2001) describes humanitarian assistance "programs conducted to relieve or reduce the results of natural or man-made disasters or other endemic conditions such as human pain, disease, hunger, or privation that might present a serious threat to life or that can result in great damage to or loss of property" (Joint Chiefs of Staff 3-07.6, 2001, p. GL-5).

NGO

A nongovernmental organization (NGO) is a voluntary group of individuals or organizations. They usually are not affiliated with any government and are formed to provide services or to advocate public policy (Encyclopedia Britannica, 2006). Although some NGOs are for-profit corporations, the vast majority are nonprofit organizations. Some NGOs, particularly those based in authoritarian countries, may be created or controlled by governments.

Seabag

Literally, Navy seabags are luggage that Navy personnel use to store their uniforms, clothes, wills, and personal use items for deployment. Based upon Navy sailors' operational platform, they must have these seabags ready for deployment with proper uniforms. Figuratively, packed seabags also include items that are required in deployment- the right skills sets, knowledge sets, mindsets (mental and emotional readiness), and coping mechanisms.

Research Method

The research method selected to study U.S. Navy nurses' experiences in Operation Unified Assistance aboard the USNS MERCY was grounded theory. Because the OUA

phenomenon is relatively unknown, the grounded theory methodology is an ideal model for this study. Grounded theory makes great contributions to knowledge in an area where little research has been done (Strauss & Corbin, 1998). The study's plan entails the simultaneous collection, organization, and analysis of data and results in a theoretical formulation of the experiences being explored.

Conceptual Framework

The resulting theory grounded in the experiences of U.S. Navy nurses during OUA offers a new theory on the humanitarian disaster relief experiences of military nurses within a specific context. The research study was approached from a disaster nursing perspective, and the Jennings Disaster Nursing Management Model was chosen to obtain information. The study does not attempt to prove or disprove the Jennings Disaster Nursing Management Model, rather, the model provides an approach to the research. The model examines the nursing process as practiced across the phases of disaster, just as the proposed research study examines the nursing practices of Navy nurses during disaster relief and humanitarian assistance during OUA.

Importance of the Study

Currently, few models or conceptual frameworks exist which "guide nurses through the process of understanding disaster nursing" (Jennings-Sanders, 2003, p. 69). The Jennings Disaster Nursing Management Model was a conceptual framework aimed at helping community nurses plan for and manage disasters at their workplace while providing outpatient community health services (Jennings-Sanders, 2003). The model was developed originally for nursing students in a community health class as an introduction to disaster nursing and disaster management. The nursing process was ingrained in all four phases of the model: Phase I (pre-disaster), Phase II (disaster), Phase III (post-disaster), and Phase IV (positive client/population

outcomes). Nurses were encouraged to "provide holistic, culturally competent care to all populations" in this model (Jennings-Sanders, 2003, p. 75).

During OUA, Navy nurses used the hospital ship as a platform to provide inpatient nursing care to disaster survivors during Phases II (disaster occurrence) and III (post-disaster) of the natural disasters. During the humanitarian assistance portions of OUA, Navy nurses provided outpatient services to include public health and community health care.

During Phase II of the model, when the disaster actually occurs, nurses take on roles as caregiver, educator, and case manager (Jennings-Sanders, 2003). As caregivers, they optimize the well-being of the disaster stricken by providing holistic emotional, physical, psychological, and cultural care. Educators engage in secondary prevention activities by teaching disaster survivors how to get prompt treatment once diagnosed. Case managers and liaisons to community services plan for, coordinate, and monitor referrals of disaster survivors to community health services.

During Phase III of the model, nurses become involved in the assessment, planning and implementation segments of health care services (Jennings-Sanders, 2003). For the assessment segment, nurses reevaluate the survivors' healthcare needs, provide tertiary preventive interventions, and reevaluate the current disaster plan. In the planning segment, nurses revise the disaster plan and arrange for the next potential disaster. During the implementation segment, nurses document the existing disaster plan's findings (lessons learned) and disseminate the findings (i.e., publish the study); the nurses should also practice the newly revised disaster plan during this segment of Phase III.

Scope and Sequence of the Study

This study's findings resulted in a grounded theory that will explain the experiences, clinical practice, preparation, and collaboration of Navy nurses during OUA aboard the USNS MERCY. The findings have potential to improve future disaster relief and humanitarian assistance missions. The Jennings Disaster Nursing Management Model's Phases I and IV consisted of performance improvement activities - used to improve the nursing process during a specific disaster event. Likewise, this study resulted in lessons learned and a grounded theory aimed at helping improve Phase I (pre-disaster) and Phase IV (client/population) of future U.S. Navy hospital ship deployments. In Phase I, the nurses' workplace was assessed for resources and risks. To improve disaster nursing performance, the work setting (the USNS MERCY hospital ship platform) was assessed for the presence (resources) or lack of (risks) of the following: collaborative practice agreements, disaster training of staff, existing disaster management plan, and existing disaster assessment tools (Jennings-Sanders, 2003). In the final culminating phase of the model, Phase IV, a decrease in mortality rates and health care costs was expected, as were improvements in: health status, disaster nursing knowledge, disaster nursing plan effectiveness, and collaborative relationships between nurses and other agencies. In this study, nursing care outcomes, disaster nursing knowledge and preparedness, and collaboration with NGO nurses were examined.

Chapter Summary

The purpose of this study was to identify, describe, and generate a theoretical analysis of Navy nurses' experiences, preparation, practice, and collaboration in Operation Unified Assistance aboard the USNS MERCY. Since Navy nurses' experiences in the 2004 Indian Ocean earthquake and tsunami disaster relief efforts aboard the USNS MERCY had not been

extensively examined or explicitly described in peer-reviewed or data-based literature, the goal of this original research study was to explain U.S. Navy nurses experiences and how nurses prepared, trained, performed, and (for the first time ever) worked with nurses from a non-government organization during a natural disaster relief mission aboard a hospital ship. The long-term objective of the study was to synthesize original research and provide a theoretical model developed from nurses' descriptions of their experiences in humanitarian assistance in disaster relief efforts. The advancement of knowledge in such efforts will improve the provision of nursing care to those stricken by natural disaster and ultimately improve the health of the global community. To accomplish this, grounded theory methodology was used to gain insight into nurses' experiences and nursing practice aboard a hospital ship during Operation Unified Assistance.

CHAPTER 2

Review of the Literature

Purpose

A literature review provides context and rationale for the current study through the critique, analysis, and synthesis of previously written articles (Ryan-Wenger, 1992; Creswell, 2003; Pan, 2004; Leedy & Ormrod, 2005). Since no research-based information on the experiences of Navy nurses in Operation Unified Assistance aboard the USNS MERCY appears in the present literature, findings from this study provide valuable insight. The literature review describes and assesses available research-based knowledge on related phenomena of interest and proposes future research in humanitarian assistance through disaster relief nursing. Material selected for this review included research-based data on nursing practice in (a) humanitarian assistance and natural disaster relief efforts and (b) military nurses in humanitarian assistance and disaster relief. The closest studies and their major themes were included to establish the need for this study and support the significance, meaningfulness, and relevance of the study's results (Leedy & Ormond, 2005). The goal was to convince the reader that the current study needed to be done to advance science in this field further along.

Methods

A search of CINAHL, MEDLINE, and PsycINFO, revealed no articles on nursing practice or research aboard the USNS MERCY during 2005 tsunami and earthquake relief efforts; therefore, additional electronic literature searches were conducted on the same databases extending back to their limit years of 1982, 1966, and 1967, respectively. The scope of the search

was expanded to include several combinations of the following keywords: "relief work," "humanitarian aid," "natural disasters," "disaster research" "nursing," "military," and "research." Of the 230 works cited, most fell into the categories of: personal narratives, anecdotes, and pictorials on natural disaster relief experiences; research studies on post traumatic stress disorder among relief workers; opinion and scientific papers on medical care during humanitarian relief efforts; and journal articles on lessons learned during military involvement in humanitarian crises other than war (mostly peacekeeping deployments). These categories could not be ignored since they were the studies closest to the phenomenon of interest. Any work thought to reveal facts, experiences, or themes relevant to being a nurse aboard a hospital ship during humanitarian assistance and natural disaster relief were reviewed. As articles were acquired, their reference sections were also reviewed for additional relevant articles. For the purposes of this chapter, relevant articles from peer-reviewed journals were analyzed and critiqued, and common themes were synthesized.

Beyond the aforementioned computer databases, literature searches for relevant research-based works were conducted in disaster relief organizations' websites, publicly accessible military research websites, and published dissertations. During the expansive literature search and review, care was taken not to influence the researcher in future data collection and analysis.

Humanitarian Assistance and Disaster Relief Efforts

According to the United Nations' Office for the Coordination of Humanitarian Affairs (2006), natural disasters and armed conflicts have been responsible for severe humanitarian crises around the world. Each year, thousands die and millions are forcibly displaced from their homes. Within the last decade, we have seen a marked increase in the occurrence of natural disasters resulting in grave human suffering, with great losses of life, property, and material

damage (United Nations' Office for the Coordination of Humanitarian Affairs, 2006). In response to the increasing occurrence of natural disasters within the last decade, the humanitarian aid industry has rapidly grown - as have the fields of science, health discipline, and research (VanRooyen, Hansch, Curtis, & Burnham, 2001).

History

The humanitarian aid industry's history is rooted in the 1863 establishment of the International Committee of the Red Cross by Swiss nationalist Henri Dunant (International Federation of Red Cross and Red Crescent Societies, 2006). Dunant came upon the scene of a bloody battle between French and Austrian armies in the town of Solferino, Italy. Some 40,000 casualties lay dead or wounded. According to Red Cross' historical accounts, Dunant was inspired and moved to provide aid to the wounded soldiers, such as Florence Nightengale, famous for battlefield care during the previous decade's Crimean War (American Red Cross, 2006). Dunant then authored a book entitled Memory of Solferino where he recounted his experiences and called for the creation of an international body to aid the wounded in battle. Subsequently, the Red Cross was formed, and Geneva Convention was adopted. Known today as the International Federation of Red Cross and Red Crescent Societies, the first formal humanitarian organization's originating mandate was to offer care for the wounded on the battlefield, while at the same time remaining neutral.

Today, many of the health care professions of international government organizations, national militaries, and nongovernmental organizations (NGOs) deploy in response to disasters. Just as nursing was a vital part of humanitarian aid industries' beginnings, nursing today is strongly associated with the care of others in disaster zones (Davies et al., 2003). Because of their involvement in all levels of local, national, and international disaster prevention, care

delivery, and management, nurses are integral to humanitarian aid. The success of humanitarian health interventions depends on improving upon the training, movement to evidence-based practice, collaboration, research, and experiences of the relief personnel, particularly nurses.

Training Matters

The phrase "nursing is as old as humanity" is appropriate; the nursing profession has always worked to alleviate suffering (Kalisch & Kalisch, 1995, p. 1). What greater suffering exists than the suffering of victims affected by disasters? Whether the disaster is caused by humans (armed conflict, war, explosion, terrorism, structure collapse, famine) or nature (earthquake, tsunami, fire, flood, hurricane, drought), nurses have played significant roles in providing relief and caring for the disaster stricken. Disaster nursing, defined as "the systematic and flexible utilization of knowledge and skills specific to disaster related nursing, and the promotion of a wide range of activities to minimize the health hazards and life threatening damage caused by disasters in collaboration with other fields", is relatively new (Japan Society of Disaster Nursing, as cited by Jennings-Sanders, Frisch, & Wing, 2005, p. 80). While the origins of the modern nursing profession can be traced back almost two centuries, the formalized discipline of disaster nursing has only been evolving within the last two decades. While six nursing schools in the U.S. currently advertise elective courses on disaster nursing on the Internet, it is unknown how many nursing schools include humanitarian assistance and disaster relief content in their core curriculum (Jennings-Sanders, Frisch, & Wing, 2005). Within the U.S., the Federal Emergency Management Agency (FEMA) lists colleges and universities that offer specialized programs, majors, degrees, or certificates in the following related fields: emergency management (121 schools); international disaster relief and humanitarian assistance (9 schools); and public health, medical, and related programs (12 schools) (FEMA, 2006).

Among international short courses on humanitarian assistance, the following are better known: the International Committee of the Red Cross' course entitled Health Emergencies in Large Populations, the Combined Humanitarian Assistance Response Training, and the Office of Foreign Disaster Assistance's funded courses (VanRooyen et al., 2001).

Health care missions focused on providing relief to populations after the emergency phase of a disaster rely heavily upon primary care, preventative care, infectious disease/tropical medicine, environmental health, international health, and public health practices (Lillibridge, Burkle, & Noji, 1994; Sharp, Yip, and Malone, 1994; Murray, 1999; Aberle, Bethards, Orsega, & Ricciardi, 2003; Drifmeyer and Llewellyn, 2004). Much like the newly emerging discipline of disaster medicine (which has its roots in emergency, military, and public health medicine), disaster nursing can find its roots in the corresponding disciplines of nursing (deBoer, 1995). Throughout the literature, it is recommended that disaster nursing content include: emergency health assessment; public health surveillance and epidemiology; federal resources for humanitarian assistance; United Nations operations; humanitarian relief organizations; health needs of refugee/displaced populations; complex societal, cultural, psychological, and health issues of refugee/displaced populations; public health consequences of disasters; international health systems; public health administration; international humanitarian law/Geneva Conventions; ethical issues in providing care; Sphere Project Performance Standards; and other internationally agreed-upon humanitarian performance standards (Lillibridge, Burkle, & Noji, 1994; Crutcher, Beecham, & Laxer, 1995; Aberle, Bethards, Orsega, & Ricciardi, 2003; Drifmeyer & Llewellyn, 2004). Within current literature, programs which specifically address disaster nursing are emerging. Davies et al. (2003) describe a comprehensive master's program in disaster relief nursing which is focused on preparing nurses in the specialty of

transcultural/transnational nursing to provide care throughout the disaster continuum - from disaster preparedness to long-term physical, psychological, spiritual, and sociocultural consequences of the disaster events. In response to the U.S. uniformed services' increased participation in humanitarian missions, several courses are available to military nurses, among them: the Military Medical Humanitarian Assistance Course; the Center of Excellence in Disaster Management and Humanitarian Assistance training exercises; the Combined Humanitarian Assistance Response Training course; the Air Force's International Health Specialist Program; and the U.S. Public Health Service's computer training (Aberle, Bethards, Orsega, & Ricciardi, 2003).

Movement Towards Evidence-Based Practice

Within the discipline of humanitarian assistance, several issues of importance are emerging. Within the health sector, an important issue is the evaluation of the effectiveness of humanitarian interventions. Often, the effectiveness of clinical care is "complicated by the lack of treatment protocols, inappropriate drug use, high procedural complication rates, and variable referral practices" (Brandt, Drummond, & Richman, 2001, p. 294). As humanitarian relief becomes more professionalized, the need to standardize treatment protocols and evaluate interventions' effectiveness, efficiency, efficacy, humanity, equity, and financial feasibility are needed.

During OUA, a need to access information on evidence-based humanitarian and disaster relief nursing practices to make informed nursing practice decisions was clear. However, accessing such evidence was difficult (J. Comlish, personal communication, August 6, 2005). To make informed decisions, access to up-to-date and relevant information is critical to the quality of aid provided. When natural disasters hit, rapid sharing of humanitarian aid information from

NGOs and relief agencies is needed. During the 2005 tsunami relief efforts, the lack of a centralized, publicly accessible, searchable, and comprehensive database on humanitarian disaster relief led to unnecessary duplication of efforts and ill-informed decisions (Mills, 2005). Frequently, information is only shared internally, or, in the case of politically funded aid, it is often not readily accessible - or it has been censored. Databases are often not comprehensive, and the quality of evidence is questionable (Mills, 2005). After the recent tsunami crisis, the Cochrane Collaboration led the Evidence Aid project, "a growing resource of summaries of best evidence on the effects of health care in disasters" (Mills, 2005, p. 2). Evidence summaries for healthcare interventions in natural disasters and other emergencies were posted on the project's website and included topics such as infectious diseases, injuries and wounds, rebuilding of communities and infrastructure, mental health, nutrition, rehabilitation, pregnancy, and childbirth (Cochrane Collaboration, 2006). A review of the summaries revealed information relevant to nursing practice but which were not specifically evidence-based nursing practice (topics such as disease processes, wound care, transfusions, and intravenous fluids). Once best evidence is made accessible, it can be used to develop evidence-based practice to optimize patients' health.

This study was aimed at explaining how nursing was practiced during the humanitarian assistance and disaster relief mission. Participants were asked how they had practiced clinically and if there had been any issues or problems. According to the Iowa Model of Evidence-based Practice to Promote Quality Care, identification of clinical problems is a catalyst for nurses to look for research-based ways to practice - and to "seek scientific knowledge for use in decision making" (Titler, Kleiber, Steelman, Rakel, Budreau, Everett, Buckwalter, Tripp-Reimer, & Goode, 2001, p. 502). Was evidence-based practice, defined as "the conscientious and judicious use of the 'best evidence' to guide delivery of health care services (Titler et al., 2001, p. 498),"

practiced during OUA? What evidence guided nursing clinical practice - evidence more broadly defined to include nurses' clinical experiences, patients' personal experiences, and situational contexts (Rycroft-Malone, Seers, Titichen, Narvey, Kitson, & McCormak, 2004)? In order to optimize nursing practice and patient outcomes in humanitarian disaster relief efforts, this study explains nurses' clinical practice experiences. From this study's findings, the first step toward evidence-based humanitarian disaster relief nursing interventions (and future standardized guidelines and measurable outcomes) was made.

Collaboration with NGOs

The expression "no man is an island unto himself" is nowhere more true than in the humanitarian assistance and disaster-relief industry. Key stakeholders, such as relief providers, relief organizations, academia, donors, host governments, local health system providers, and the relief recipients are often drawn together by disaster. Unfortunately, all too often, despite efforts to standardize and coordinate activities, these stakeholders remain "an intricate mosaic of people, capabilities, and allegiances" (VanRooyen et al., 2001, p. 216). Many believe that the success of humanitarian interventions rely heavily upon interagency coordination and that militaries must cooperate, coordinate, and communicate extensively with each other and with governmental and nongovernmental humanitarian relief organizations. Several books, dissertations, and case studies have addressed the interrelationships and coordination among military and nongovernmental agencies during humanitarian assistance missions (Seiple, 1996; Solheim, 2000; Byman, Lesser, Pirnie, Benard, & Waxman, 2000; Sharp, Wrightman, Davis, Sherman, & Burkle, 2001). For more effective military humanitarian assistance projects, Drifmeyer and Llewellyn (2004) recommended that projects are thoroughly coordinated from the planning stages, throughout the execution, and after completion. Coordination amongst health care

providers from involved militaries, host nations, and nonmilitary relief workers is key and can be accomplished through precrisis communication, face-to-face meetings, virtual information sharing, and continuous application and sharing of established criteria and measures of effectiveness from past and current projects (Drifmeyer & Llewellyn, 2004). The few journal articles that recount personal experiences and lessons learned by health care workers regarding humanitarian assistance missions discuss conflicting matters about working with NGOs. Physicians Sharp, Yip, and Malone (1994) reported their observations and recommendations from three international humanitarian assistance missions and attributed misunderstanding and poor coordination to organizational differences between military and relief agencies. However, Army nurse Samuels (1997) reported effective communication and networking when working with governmental and NGOs when she was assigned as military liaison. To date, literature which specifically addresses the relationships among military and NGO nurses in the delivery of patient care aboard a hospital ship cannot be found.

Anecdotal Reports on Disaster Relief and Humanitarian Nursing

Current nursing literature on the topic of disaster relief nursing reflects a mosaic of individualized observations, personal narratives, and stand-alone case studies. Most natural disaster relief efforts are recounted by civilian nurses in popular nursing journals. Formatted in diary-like journal entries, nurses often recount their relief efforts through pictorial documents and thick descriptions of their personal experiences. What is seen in today's literature regarding humanitarian assistance in response to natural disasters is reflected in the anecdotal reports of nurses' experiences during: Hurricanes Katrina and Rita (Frank, 2005); Indian Ocean earthquake and tsunami (Chaya, 2005; Dawson, 2005; Darraugh, 2005; Ford, 2005); Hurricane Floyd (Corbett, 2001; Justesen & Pokorny, 2002); and Hurricane Andrew (Langevin, 1993; Myrick,

1993; Robinson, 1993). Collectively, these narratives reveal that disaster relief nursing is experienced as difficult, arduous, and inspiring. A synthesis of the aforementioned anecdotal reports reveals that disaster relief nursing practice requires clinical competence, collaboration, communication, commitment, and compassion.

Most anecdotal reports on humanitarian assistance nursing include nurses' descriptions of the humanitarian mission, their role in relief efforts, and personal reflections on lessons learned, as well as recommendations for improvement, mostly formatted as journal or diary entries. Information on humanitarian assistance nursing is mostly presented as Army nurses' personal narratives in the peer-reviewed journal *Military Medicine.* Personal narratives during humanitarian assistance missions include nurses' experiences in Zagreb, Croatia (Smith & Smith, 1995); Operation Restore Hope in Somalia (West & Clark, 1995); Haiti (Forster, 1996); Operation Sea Signal in Cuba (Samuels, 1997); and various peacekeeping missions (Yoder & Brunken, 2003). Collectively, these aforementioned, anecdotal reports reveal that humanitarian nursing practice requires innovation, flexibility, critical thinking/problem solving skills, effective communication skills, cultural awareness and respect, preparation, and ongoing training.

Research on Disaster Relief and Humanitarian Nursing

Psychological and physical impacts of disasters on relief workers and disaster survivors are known and have been well-researched in the humanitarian relief literature. What has not been readily examined and researched are nurses' experiences, preparation, training, and clinical practice in disaster relief. Research shows that disaster relief work can be both rewarding and disheartening. Following disasters, relief workers have historically faced many negative stressors, such as psychological distress (most notably posttraumatic stress disorder), changes in behavioral patterns, and changes in interpersonal relationships (Duckworth, 1991; Laube-

Morgan, 1992; Armstrong, Lund, McWright, & Tichenor, 1995; Soliman, Lingle, & Raymond, 1998; McCaslin, Jacobs, Meyer, Johnson-Jimenez, Metzler, & Marmar, 2005). Positive views following disaster relief work include: ability to better understand self; ability to react logically in abnormal situations; and new feelings of camaraderie from helping others - and of belonging to a group (Armstrong, Lund, McWright, & Tichenor, 1995; Soliman et al., 1998). A meta-analysis of 160 empirical disaster research studies published from 1981 to 2001 revealed that survivors most frequently had outcomes of "psychological problems (anxiety, depression, and posttraumatic stress disorder), nonspecific distress, health problems, chronic problems in living, loss of resources, and problems specific to youth," while "most samples of rescue and recover workers showed remarkable resilience" (Norris, Friedman, & Watson, 2002, p. 207).

Cox (1997)

Cox (1997) described how relief workers (including nurses) managed difficult disaster work - and their perceptions of the impact – during the 1983 Ash Wednesday bushfire on the community of Victoria, Australia. Guided by the theoretical framework of constructionism, this particular study was part of a larger research project that explored people's experiences of the event and how they constructed meanings in order to move forward. In the smaller study, 14 relief workers, consisting of professionals who were residents of the community and others who came in to assist the community, were interviewed. Occupations included: community health nurses, mental health nurses, medical practitioners, mental health practitioners, social workers, fire relief workers, and disaster service managers. Some of the relief workers were in the dual role of victim and helper and were asked to describe their experiences regarding the fire and the reasons they stayed in the community. All of the relief workers were asked about the role they played after the fire and how each managed his or her role. Interview data were analyzed through

the organization of constructions and then reconstructed around a salutogenic framework. Two construction groupings were found: tensions and restoring energy. Disaster relief work tensions included experiences of personal tensions from work overload and conflict; role confusion when victim and helper; and the insider/outsider phenomenon. The workers' were energized by relief work when fulfilling their role philosophy and contributions through working with others, re-energizing themselves through humor and/or nature, and locating a sense of meaning in their helpfulness or competence. While the timing and techniques of data collection and analysis of Cox's study were not explicitly described, the qualitative study was strengthened by the triangulation of data from interviews and discussions evoked by community publications (e.g., newspaper articles, photographs, paintings).

Cox (1997) concluded that disaster relief work is difficult and that relief workers need to be prepared and particularly aware of the insider/outsider phenomena, whereby survivors may isolate themselves, withdraw, and refuse outside help. Cox (1997) recommended that disaster workers who enter a community as outsiders should work through existing community groups and individuals to gain access to those who need their help. They should also be prepared to help insider disaster relief workers who may be victims of the disaster themselves. In turn, insider disaster workers should work to welcome outsider colleagues and broker access for them. Within his study, Cox found that nurses are accepted as valued and trusted existential insiders, with the exception of mental health nurses whose psychiatric work is masked by societal stigma. He linked much of the workers' difficulties and lessons learned to a critical but under-researched aspect of disaster relief work- the insider/outsider phenomenon. Cox gave voices to the phenomenon of disaster relief and advocated for social action within the study's community,

calling for a partnering and strengthening of relationships between the outsider relief organizations and the vulnerable insider community.

Soliman, Lingle, and Raymond (1998)

Soliman, Lingle, and Raymond (1998) examined disaster relief workers' experiences in providing outreach mental health services to the survivors of a 1993 Illinois flood. This descriptive study looked at the outreach workers' perceptions of their contributions to a local disaster recovery project entitled "Project Recovery." Although not nurses, per se, these indigenous project workers (some survivors themselves) were trained to provide mental health services and information to survivors of a massive natural disaster. Following their relief efforts, 64 workers (the number taken from an impressive 61% questionnaire return) agreed to complete the Worker Perception Scale survey. Reportedly, results overwhelmingly revealed that the experience had a positive impact on the outreach workers' professional and personal lives. Interaction with survivors, provision of outreach counseling, and continuous professional collaboration contributed to positive perceptions and mitigated stress experienced by the workers. Difficulties, such as too much paperwork and locating survivors, negatively impacted perceptions of contributions. Overall, indigenous workers with longer experience in human services, longer involvement with the disaster recovery project (eight months), and educational backgrounds in the social sciences, reported more positive perceptions of the impact of their services. The study set out to examine the impact of disasters on relief workers and describe the workers' concerns and suggestions to improve relief services. It contributes to the nursing knowledge by describing the workers' perceptions of service delivery after a disaster; however, it falls short in fully describing: the sample's size adequacy and representativeness; the statistical

analysis tests used; the alpha level selected a priori; and thus the significance and generalizability of the survey results.

Griffiths, Emrys, Lamb, Eagar, and Smith (2003)

Griffiths, Emrys, Lamb, Eagar, and Smith (2003) conducted a qualitative study to assess the needs of nurses during the 1999-2000 Operation Safe Haven project in Sydney, Australia. The researchers conducted focus group interviews for 87 nurses who provided care to Kosovar and East Timorese refugees at the East Hills Reception Center and other organized in-depth interviews with two nursing managers of the project. They set out to identify the skills, knowledge, and support nurses needed to give competent care to the refugee population. Through the interviews and qualitative analysis, it was found that the nurses' clinical skills and knowledge varied as Operation Safe Haven progressed. Initially, triage and emergency skills were required, and as time passed, community health nursing or independent rural nurse practitioner skills were called for. Nurses specifically reported a need for more accurate comprehensive health status reports of the refugees, greater professional support (particularly in the obstetric and pediatric fields); specialized health assessment skills during repatriation evaluation of refugees; and more culturally competent and trauma-sensitive skills. The nurses' psychosocial well-being was impacted by torture/trauma as well as cultural, role-related, and environmental stressors. Nurses reported stress when exposed to accounts of trauma, prejudice, ethical dilemmas, moral distress, heavy workload, poor staffing, and role strain. They experienced feelings of "shock, sadness, incomprehension, emotional exhaustion, anger, powerlessness, and disillusionment" (Griffiths et al., 2003, p. 187). While nurses identified several helpful psychosocial support mechanisms, they also reported the need for ongoing

counseling and debriefing. Most satisfying rewards came from the special relationships they had developed, the continuity of care they provided, and their roles as patient advocates.

The Griffith et al. study is most similar in format to the current study's aims. It is a one of a kind research study that queried nurses on what they needed to competently care for refugees during humanitarian assistance. Beyond a simplistic recounting of personal experiences and individual case studies, the researchers used qualitative research methodology to obtain a more overarching sense of the skills, knowledge, and support needed by Operation Safe Haven humanitarian nurses. While it is unknown how representative the study's participants were of the entire nurse population of Operation Safe Haven, the researchers recognized the limitations of their volunteer study. The overview of interview questions used by the researchers was too vague for replicability in another population. A copy of the semi-structured interview guide with more exacting questions would have been preferred. In addition, a description of how the interview questions evolved through the subsequent focus groups and in-depth interviews would have enriched the report. This study's transferability and overall quality could have been improved if, like many other research studies, the researchers had used a demographic tool to assess and describe participants' experiences, training, current position, age, gender, and the like.

Bjerneld, Lindmark, Diskett, and Garrett (2004)

Bjerneld, Lindmark, Diskett, and Garrett (2004) conducted a qualitative analysis of interview data from Swedish nurses and physicians who had been on a humanitarian assistance mission with a Swedish NGO in the past year. The interview data had been collected in 1999-2000 as part of an initial study commissioned by the Swedish National Board of Health and Welfare to explore the training needs of health personnel in humanitarian missions. In 2001, the original report, published in Swedish, summarized factual training information, which did not

include analysis of the interviews. Twenty health personnel completed the face-to-face or telephone interviews consisting of demographic data, mission profiles, and mission-preparation questions. The rest of the semi-structured interview queried participants on how well they handled their field roles, preparedness, and knowledge deficits, and how the field impacted their performance, and what they would say to peers about volunteering. First researcher, Bjerneld, and an unidentified interviewer conducted the queries and took detailed notes during the interviews. Although it is unclear how soon after the interview and by whom the interview notes were transcribed, the transcript data were analyzed and qualitative content analyses and standardized procedures were used to analyze all transcript data. After Bjerneld and Garrett conferred on major themes, categories, and representative quotations, the work was translated from Swedish to English. The time at which the transcripts were analyzed and how the results were translated to ensure completeness was not documented. Six major themes from the interviews of the humanitarian health care workers were analyzed; they included: "positive feelings about humanitarian work, frustration and stress, unexpected nature of part of work, perceptions and feelings about other 'actors', factors perceived as affecting success, and roles of the recruiting organization" (Bjerneld et al., 2004, p. 104). Strengths of the study were identified, and the researchers adapted for some of its limitations. To increase the credibility of this qualitative work, they included participants who had a variety of experiences and backgrounds. The researchers also countered their potential biases by agreeing on codes, categories, and themes, and by doing so, increased the dependability of the analysis process. Caution was noted that the transferability of the study's findings would depend on the similarity to Swedish volunteers and that probable highest transferability of the study's findings would be to Nordic and western European situations. The researchers concluded that humanitarian assistance

missions are increasingly dangerous and complex and that success is influenced by workers' professional competence, experience, and special preparatory training, to include pedagogy and management courses. Studying humanitarian assistance using a systems dynamics approach and global perspective was recommended - and preferred - in order to provide effective ways to prepare and support health personnel.

Summary of Research on Humanitarian and Disaster Relief Nursing

Like other relief providers, nurses reported both positive and negative aspects of humanitarian assistance and disaster relief. Negative stressors experienced by nurses included: the role itself, cultural stressors, environmental stressors, and organizational stressors (Cox, 1997; Soliman et al., 1998; Griffiths et al. 2003; and Bjerneld et al., 2004). Positive aspects of humanitarian nursing included: helping and advocating for patients, along with developing strong relationships with patients and other humanitarian workers (Cox, 1997; Soliman et al., 1998; Griffiths et al., 2003; and Bjerneld et al., 2004). Coping mechanisms most frequently reported included: humor, nature, social support, counseling, and debriefing (Cox, 1997; Soliman et al., 1998; Griffiths et al., 2003; and Bjerneld et al., 2004).

Military Nurses in Humanitarian Assistance and Disaster Relief

The Military's Role in Foreign Humanitarian Assistance - Past, Present, and Future

The U.S. military has played a major role in providing humanitarian assistance world-wide. The purpose of foreign humanitarian assistance is to "relieve or reduce the results of natural or man-made disasters or other endemic conditions, such as human suffering, disease, or privation that might present a serious threat to life or that can result in great damage to or loss of property" (Joint Chiefs of Staff 3-07.6, 2001, p.I-1). Our military has a long, proud tradition of providing humanitarian assistance and disaster relief overseas; it is uniquely equipped,

structured, and trained to provide a rapid response during emergent humanitarian crises. However, humanitarian missions are not the U.S military's primary goal in the minds of many military leaders (W. B. Poss, personal communication, March 6, 2005). As recently as November 2005, the Department of Defense elevated the importance of humanitarian efforts by classifying the missions as core missions comparable in importance as combat missions; humanitarian missions when classified as a subset of stability, security, transition, and reconstruction operations are intended to "lead to sustainable peace while advancing U.S. interests" (Department of Defense, 2005, p. 2). It will take a while for military leaders, legislators, and others to acquiesce to the fact that the military's only primary mission is not just the defense of the country. At this time of transition, our military's foreign humanitarian assistance efforts are still limited in scope and duration and are only meant to supplement the efforts of U.S. and host nation civil authorities and private organizations (Joint Chiefs of Staff 3-07.6, 2001).

The U.S. military assists with relief, dislocated civilian support, and security or technical assistance. These operations may vary from short-term tasks, from emergency medical care provision to communications restoration (Joint Chiefs of Staff 3.07-6, 2001). Occasionally, foreign humanitarian assistance operations are run at the same time as other types of operations; these military operations other than war (MOOTW) include peace-keeping, nation assistance, or noncombatant evacuation operations. Since the environment of these other operations are uncertain or hostile at times, military leaders institute force protection and security measures to protect troops (Joint Chiefs of Staff 3-07.6, 2001). The United States Agency for International Development (USAID) is the lead agency for U.S. military's humanitarian assistance efforts; these efforts are coordinated by the USAID's Bureau for Humanitarian Response and Office of U.S. Foreign Disaster Assistance.

Military Nurses and Research in Humanitarian Assistance and Disaster Relief

Literature on military nurses' experiences in humanitarian assistance and disaster relief is relatively scarce as compared to the wide variety of literature available on military nurses' experiences, training, preparation, and collaboration in combat situations. Within the last two decades, numerous anecdotal and historical accounts have been written in regard to military nursing during the Vietnam War, Desert Shield, Desert Storm, and even World War II. Cox (2001) reviewed over 90 military journal articles, several military nursing books, and various military websites on nursing practice in military unique environments (both combat and other than war operations). This comprehensive review of the literature revealed the following themes: "operational readiness; hardship and emotional pain; battle fatigue; austere environment; flexibility/adaptability/improvisation; humor; camaraderie; pride and patriotism; paraprofessionals; remembrance of special patients; job satisfaction; and role expectations, conflict, and stress" (Cox, 2001, p. 6).

Operation Iraqi Freedom has served as the wartime context of research studies focused on nurses aboard the Navy hospital ship, the USNS Comfort. In studies funded by the TriService Nursing Research Program of the Uniformed Services University of the Health Sciences (results are yet to be published), Richard (2002) examined nurses' quality of life, and Gehring (2005) examined nursing care experiences. In addition to research on shipboard nursing, Cox (2005, 2001) conducted a qualitative research study on nurses' experiences as sole nursing providers aboard aircraft carriers.

Turner (1998)

While military nurses have greatly contributed to the U.S. military's long legacy of humanitarian assistance abroad, research on this subject matter is sparse. Turner (1998)

conducted a qualitative study which described the experiences of head nurses in military operations other than war. She used a descriptive, exploratory approach, and asked the following research question: "What is the experience of chief nurses in military operations other than war?" (Turner, 1998, p. 2). She recruited 13 Air Force nurse participants who were deployed to sites ranging from Saudi Arabia, Oman, Panama, Cuba, Somalia, Guam, Croatia, England, and Turkey. The deployments ranged from three to seven months in duration, and missions varied from humanitarian relief to peacekeeping. Using Hermeneutic phenomenology as method and philosophy that informed the study, Turner (1998) found the "fundamental structure of the experience was the deployment trajectory with five themes: preparing, arriving, loving, working, and leaving. Further analysis revealed five essential themes: paradox, leadership, caring, knowing, and the true military" (p. iii). Within the "working" fundamental structure of the experience, Turner (1998) identified the following interpretive clusters and themes: "challenges and language barriers; daily routine; logistics and improvisation; additional duties and staffing mix; population diversity and patient conditions; dangerous environment and bunkers; practice standards; and competency and translating into different environments" (p. 43). According to the participants, military operations other than war required clinical specialties, such as maternal child health, mental health, medical-surgical nursing, perioperative nursing, trauma nursing, community and public health nursing, gerontological nursing, and patient education. The following educational issues were identified as critical in military operations other than war: preparation of immediate, predeployment training; readiness training on lessons learned from previous similar deployments; ongoing recurrent training; provision of military support information and availability of information during deployment; and cultural competence (including moral concerns from various cultural perspectives) (Turner, 1998). During the

operations, chief nurses transformed their feelings of apprehension, uncertainty, and fear into pride, understanding, and trust. Prior to the study, Turner (1998) had identified the study's limitations, including descriptions limited to those who chose to participate in the study and descriptions limited to the information provided by the participants on military operations other than war (which was limited to the participant's ability to isolate these experiences in memory from other experiences in the Air Force); his comprehensive doctoral thesis identified conscientious, preplanned efforts made to increase the credibility of the study (Turner, 1998). Turner engaged in prolonged engagement with the culture of the participants, built trust, guarded against potential distortions, conducted persistent observations, triangulated data, and employed peer debriefing and member checking to strengthen the study's credibility.

Majma (2000)

Majma (2000) conducted a qualitative study (Master's thesis) that examined the work-related issues faced by nurse anesthetists in military operations other than war. Grounded theory methodology was used to analyze the interviews (mainly via telephone) of 20 Air Force nurse anesthetists. Eleven of the participants had been on humanitarian missions, which varied from peacekeeping to disaster relief efforts. The participants were asked about their roles, work related-issues, and how issues influenced their jobs and educational and training needs. Majma (2000) used the constant comparative method during data analysis and extracted nine themes from the data: "communication, flexibility, environment, equipment, cultural issues, personal issues, non-anesthesia roles, training, and recommendations for future deployments" (Majma, 2000, p. 60). Three specific theories emerged from the study: (a) Psychological well-being in a MOOTW environment is greatly facilitated by communication access (e.g., email, telephone, and contact with deployment predecessors), (b) Deployment success is related to predeployment

training on the field anesthesia machine and experience in regional anesthesia, and (c) Flexibility is essential (Majma, 2000). Majima identified the study's limitations, citing the use of telephone interviews and mailed questionnaires as data collection tools and the limitations of findings to the participants' voice quality and information provided.

Chapter Summary

The phenomenon of interest - Navy nurses' experiences during OUA aboard the USNS MERCY - has not previously been explored, analyzed, or described from a research perspective. An extensive review of the literature reveals that few research studies have examined natural disaster relief efforts and humanitarian assistance efforts from a nursing perspective; even fewer have examined nurses' experiences, preparation, practice, and collaboration required to provide competent care to the disaster stricken. While U.S. military nurses have long participated in humanitarian missions, the paucity in the availability of publicly accessible research in this area supported the need for this study, which took a definite step toward filling a gap in nursing knowledge.

CHAPTER 3

Methodology

This chapter addresses what transpired during collection and analysis of data. The following are presented: (a) research design, (b) grounded theory methodology, (c) adequacy for judging the quality of an inquiry, (c) protection of human rights, (d) sample and participants, (e) data collection procedures, (f) data analysis procedures, and (g) summary.

Research Design and Method

A descriptive qualitative design was used to study the experiences of Navy nurses during a disaster relief and humanitarian mission aboard a hospital ship. A purposive convenience sample of Navy nurses was recruited from the USNS MERCY hospital ship and Naval Medical Center San Diego (NMCSD) - the largest military treatment facility in southern California and primary sourcing site for nurses deployed to the USNS MERCY. The population of Navy nurses open for recruitment included: Navy nurses on active duty status aboard the USNS MERCY during any phase or portion of the Operation Unified Assistance (OUA) deployment; those able to recall and talk about their experiences during Operation Unified Assistance; and those willingly consenting to participate in the research study.

U.S. Navy nurses' experiences in the 2004 Indian Ocean earthquake and tsunami disaster relief efforts aboard the USNS MERCY had not previously been extensively examined or explicitly described in peer-reviewed or data-based literature. The goal of this original research study was to describe Navy nurses experiences and how they prepared, trained, performed, and (for the first time ever) worked with nurses from a non-government organization during a natural

disaster relief mission aboard a hospital ship. Because this phenomenon was relatively unknown, an exploratory method of research known as grounded theory was used.

A grounded theory study was undertaken to explain Navy nurses' experiences, preparation, practice, and collaboration with NGO nurses in OUA aboard the USNS MERCY. A theory of the nursing experiences, clinical practices, clinical preparation, and interagency collaboration involved in a humanitarian assistance and disaster relief mission aboard a hospital ship were developed through analysis of interviews, observations, and other contributing data (observations, field notes, and memos).

Data were collected, coded, categorized, and compared to incoming data as is fundamental to grounded theory's constant comparative method (Strauss & Corbin, 1998). The study entailed the simultaneous collection, organization, and analysis of data and resulted in a theoretical formulation of the experiences being explored. Data were analyzed using Strauss and Corbin's (1998) methodology of open coding, axial coding, and selective coding. Data collection continued until the theoretical ideas that had emerged from continuous analysis of coding, categorizing, memoing, and theoretical sampling evolved into grounded theory. The research trajectory for the new theory will include clinical practice, research, and education implications which may influence future humanitarian assistance and disaster relief missions situated on the USNS hospital ships, other military platforms, and disaster vulnerable areas in the global community.

Grounded Theory Methodology

Grounded theory provided the theoretical framework guiding this study, and its methodological approach was chosen to analyze the phenomenon of interest. It was chosen as the methodology because it helped identify issues and processes military nurses faced during

humanitarian missions aboard a hospital ship - a relatively unknown phenomenon. Grounded theory makes great contributions to knowledge where little or inadequate research has been done (Chenitz & Swanson, 1986; Strauss & Corbin, 1998; Schreiber & Stern, 2001; Creswell, 2002); it is particularly useful when existing research has left major gaps and where new research may identify areas for nursing interventions (Schreiber & Stern, 2001).

In 1967, sociologists Glaser and Strauss developed grounded theory. This qualitative approach to research has pragmatism and symbolic interactionism, a theory of human behavior, as its philosophical underpinnings (Strauss & Corbin, 1990). Glaser and Strauss applied the theory of symbolic interactionism, focusing on the underlying meanings people give to events through interaction or experience, to study human behavior and interactions and to analyze social processes (Chenitz & Swanson, 1986; Charmaz, 2000; Milliken & Schreiber, 2001). Glaser and Strauss (1967) used a strategy called comparative analysis to discover and generate theory from data. The theory that emerged in the study actually came from the prescribed analysis of the data itself - "grounded" in the data collected and not taken from a priori research (Strauss & Corbin, 1998; Glaser & Strauss, 1999; Milliken & Schreiber, 2001; Leedy & Ormond, 2005). Data which came from interviews, observations, field notes, historical documents, and anything else relevant to the study of the phenomenon were collected, coded, and analyzed, and concepts and properties emerged (Glaser & Strauss, 1967; Strauss & Corbin, 1998; Morse, 2001; Schreiber, 2001). "Grounded theory is referred to as the constant comparative method because every piece of coded data is compared with every other piece of data, with concepts and categories, and with all levels of abstraction as the developing theory begins to take form" (Schreiber & Stern, 2001, p. xvii). As the theory evolves, the researcher moves back and forth between data collection and data analysis and uses analytical interpretations of data to focus later data collection and refine

developing theories (Leedy & Ormond, 2005). The emerging theory, embedded in the context, answers Glaser's question: "What is going on here?" (Strauss & Corbin, 1998).

Several methodological approaches are available for analyzing data in a grounded theory study, among them Schatzman's (1991) dimensional analysis and Charmaz's (2000) constructivist grounded theory. For the purposes of this study, data were analyzed using the approach proposed by Strauss and Corbin (1990, 1998). This was chosen because the steps are concise, easy to understand, focused, and structured. An added benefit in selecting this approach was that a member of the researcher's dissertation committee was an expert in the methodology and graciously provided mentoring and coveted consultation in grounded theory.

Data were collected primarily through face-to-face interviews. The interviews were conducted simultaneously with data collection, as is fundamental to grounded theory's constant comparative methodology. Strauss and Corbin's (1990, 1998) approach, described in detail later in this chapter, was used and consisted of: open coding, axial coding, selective coding, and development of a theory. The researcher moved back and forth from data collection, open coding, and axial coding to refine categories and interconnections. Ultimately, a grounded theory emerged from the data.

Adequacy of Inquiry - Criteria for Judging the Quality of an Inquiry

The following criteria were used to ensure the quality of the proposed inquiry - rigor, dependability, and credibility. As emphasized by Strauss and Corbin (1998), the adequacy of a research study is based upon the adequacy of the research process through which the theory is generated. Did the researcher use "rigorous, precise, and thorough methods to collect, record, and analyze data?" (Leedy & Ormrod, 2005, p. 154) Rigor was addressed by meticulously recording every step of the research process. Conscientious efforts were made to keep a

comprehensive audit trail. Memos during data collection and data analysis were kept and offered up during audit checks. A grounded theory mentor was consulted to perform and audit the research process as it unfolded. This mentor was consulted during data analysis to ensure dependability of the findings. Were the conclusions (was the grounded theory) empirically grounded in the data? The credibility of the findings was achieved through "member checking" wherein participants were given opportunities to review transcripts to validate whether information accurately reflected their OUA experiences.

Limitations of the Study

The following limitations existed: researcher was a novice researcher; OUA deployment occurred more than one year before the interview data were collected; and several participants had been redeployed to the USNS MERCY for another humanitarian mission in 2006, possibly influencing their recall of the 2005 OUA deployment.

Protection of Human Rights

IRB Approval

Initially, the researcher sought approval from the Naval Medical Center San Diego (NMCSD) Institutional Review Board (IRB) since it has jurisdiction over both NMCSD and USNS MERCY staff. The research study was approved as an expedited/minimal risk clinical investigation program (CIP) study (see Appendix A). The research study was also approved through an expedited review for scientific merit and the protection of human subjects by the University of San Diego's IRB (see Appendix B). Three weeks into the research study, it became apparent that recruitment efforts needed to be expanded due to the transient mobility, worldwide assign-ability, and recent deployments of Navy personnel as a whole. Both IRBs granted letters of approval for additional minor modifications which included the extension of participant

recruitment from an initial three weeks to throughout the duration of the study and the expansion of the interview procedures from originally face-to-face interviews to telephone and email interviews (see Appendices C and D) .

Potential Risks and Measures to Reduce Risks to Participants

There are some foreseeable risks that participants may have potentially faced during the study. While the risks are no greater than experienced in every day life, the researcher devised a plan for minimization of risks to the participants. Participants were informed that they may be potentially at risk for physical and/or emotional discomfort. The potential risks to participants in this study were: (1) physical symptoms (possible fatigue) during the interview process, and (2) emotional symptoms (possible discomfort, awkwardness, embarrassment, distress, sadness, anxiety) during narration of experiences while deployed during Operation Unified Assistance.

To minimize physical and emotional discomfort, the interview was conducted in a location chosen by the participant and deemed by the participant to be private and comfortable. Adequate time was allowed for any questions and/or concerns regarding the study. If fatigue occurred (or for any other reason), the participant was given the choices to terminate the interview at any time, to rest, or to re-schedule the interview. The participants were also advised that they may choose to continue or discontinue the study. Should the participant need emotional support, the participants were provided the name and number of a local Advanced Practice Nurse Practitioner in Psychiatry and Mental Health (see Appendix E for participant consent).

To minimize any potential perception of coercion related to the researcher's rank (Naval Officer rank of Commander), the researcher's rank was not included on the recruitment flyers and email text. The researcher also wore civilian business attire during interviews and explained her role as nurse researcher and intent to minimize any perceptions of coercion. To ensure

voluntary participation, the participant was told that refusal to participate or decision to withdraw from the study involved no penalty or loss of benefits. Prior to the collection of any data and informant participation, written informed consent was obtained and the participant was given a copy of the consent form. The researcher offered to read the consent form and discuss any questions).

To ensure privacy, interviews were conducted in a private room chosen by the participant- a location in which the participant was comfortable and one that was conducive to interpersonal engagement. To ensure confidentiality of information, all efforts were made to protect participants' identities. Except for the consent forms (inclusive of Privacy Act and HIPAA forms), no participant names were recorded on any paperwork. Participant's names were coded and anything with identifying information was locked in a file that was accessible only by the researcher, including all demographic information forms, interview tapes, hand-written memos, field notes, transcriptions, and coding. Computerized memos, field notes, and coding were secured on a password accessible computer and password protected portable flash drives with passwords only known by the researcher. The two transcriptionists employed during the research study signed pledges of confidentiality before transcribing interview audio-tapes (see Appendix F). Interview transcriptions were numbered and did not identify participants by name. Identifiers within the interview transcripts were also removed and coded. Signed consent forms were kept in another locked cabinet (separate from first locked cabinet) accessible only by the researcher.

The confidentiality, privacy, physical, and emotional risks, along with a description of measures taken to reduce the risks, were explained to the participants during the review of the

consent form at the beginning of the interview process. The voluntary nature of the study were reiterated when the potential risks were explained.

Potential Benefits

While subjects did not receive monetary compensation for participation in the study, they were given transcription copies of their interviews during the data analysis phase, as well as actual audio tapes of the interviews at the end of the data analysis phase of the study. Potential benefits to participants of this study were: (1) an opportunity to openly discuss their experiences (positive or negative) during OUA aboard the USNS MERCY, (2) receipt of two tangible records (transcription and tape recording) of their personal oral history during a naval deployment, and (3) a sense of satisfaction that in the sharing of their experiences, both military and civilian humanitarian nurses may become more aware of the experiences aboard a hospital ship during a humanitarian assistance and disaster relief mission. New policy, educational training, clinical practice, and research projects may result from this study's findings, and a practice model may be designed based on the resulting grounded theory to enhance nursing science. Potential benefits of the current study far outweigh mitigated risks.

While participation in the study will not provide direct health benefits to the participants, the information they provide could assist nurses and other health providers to develop strategies in caring for disaster survivors aboard a hospital ship. Specific strategies include identifying: clinical training, skills and competencies; clinical practice and outcomes; and interagency collaboration. The potential benefits outweigh the potential risks of the study.

Sample and Participants

A purposive sample of U.S. military nurses who served aboard the USNS MERCY during the humanitarian assistance and disaster relief phases of OUA was used for this study.

According to the USNS MERCY Senior Nurse Executive during the OUA deployment, approximately 25-30 Navy nurses were on board the hospital ship at any given time participating in various phases of the deployment. The Senior Nurse Executive estimated that approximately 15-17 Navy nurses who deployed during OUA were stationed at the NMCSD or USNS MERCY at time of data collection.

The researcher set out to interview a sample size of 20 for this qualitative research study. Sampling of military nurses would continue until key dimensions emerged from the data and sufficient support of each of the dimensions were obtained (Strauss & Corbin, 1990). Due the transitory nature of military medicine due to deployments and transfers, sample size was also dependent upon participant availability.

Inclusion Criteria

Eligibility criteria for participation in this study included: active duty Navy nurses who deployed aboard the USNS MERCY during any part of the OUA mission; willing to participate in the study; and able to recall and talk about experiences aboard the USNS MERCY during any portion of the OUA deployment.

Gaining Entry, Finding Participants, and Recruiting Participants

Purposeful strategies for the selection of participants were employed. The following steps describe procedures used for gaining entry, finding participants, and recruiting participants:

1. Both the Senior Nurse Executives of the USNS MERCY and the NMCSD were contacted about the study. Both agreed to support this research and assist in any way they could (J.B. Comlish, personal communication, August 6, 2005; J. Town, personal communication, August 11, 2005).

2. The Senior Nurse Executives, or designated persons, sent the study recruitment advertisement flyers to their facilities' nurse group email addresses to ensure widest dissemination of recruiting advertisements. The advertisement flyers invited qualified nurses to participate in the study (see Appendix G). The email advertisement was repeatedly sent to the nursing list email groups every two to four weeks until the saturation of data was met.
3. The researcher also distributed recruitment advertisement flyers at a NMCSD Senior Nurse Executive's Nursing Leadership meeting. The researcher provided the Nurse Leaders and managers with a brief overview of the research study and flyers for distribution and posting. Instructions were given to post the flyers in prominent locations on every NMCSD nursing ward, clinic, and unit. The advertisement flyer listed the researcher's name and contact information. The researcher's rank was not included on the flyer so as to minimize any perceptions of coercion.
4. Flyers were also given to the USNS MERCY Senior Nurse Executive for advertisement and recruitment.
5. When the researcher received contact from a potential participant, the researcher answered any questions the participant posed about the study. Interviews were set up to accommodate convenient dates, times, and private locations as chosen by the participants. Phone numbers were exchanged just in case the interview needed to be changed.
6. Once participants were selected for the study, a snowball sampling strategy was also used. Participants were asked to ask others who met eligibility criteria to contact the researcher.

Description of the Participants

There were approximately 25-30 Navy nurses deployed at various times during the Operation Unified Assistance deployment according to the USNS MERCY Senior Nurse Executive at the time. Eleven Navy nurses consented to participate in the research study. Nine participants reported that they learned of the study by word of mouth from other Navy nurses. The remaining two were recruited through the email advertisement. The participants spent an average of 122 days deployed aboard the USNS MERCY, ranging for lengths of 34 to 155 days. The entirety of the deployment was 155 days, starting January 2, 2005 and culminating with a San Diego homecoming on June 8, 2005. Participant interviews took place more than a year after the deployment's end, the first interview occurred on July 19, 2006 and the last occurred on October 17, 2006. For details of the participants' demographics, see Tables 1-3.

Several of the study participants' demographic characteristics were elicited, including their current information at interview and their information during deployment. The following is a summary of the participants' demographic information during deployment. The participants' mean age during deployment was 38.1 years of age. They ranged from 23 to 51 years old with a median age of 41 years. The participants' rank ranged from Ensign, the first Naval Officer level, to Commander, the fifth Naval Officer level. The average rank was that of Lieutenant, the third Naval Officer level. This is also reflective of the Navy Nurse Corps at the end of 2005 when the largest ranking group of the 2,934 Navy nurses was the rank of Lieutenant (36% and 1,058 strong). The study's participants practiced as nurses on an average of 11.6 years, drawing from two to 26 years of nursing experience when they were deployed. On average, the participants had more years of military service than they did as nurses, averaging five years more at 14.5 years of military service. Their military service ranged from none to 23 years during the deployment. This

Table 1

Demographic Information- Deployment Dates, Age, Rank, and Years as RN

	Number	Percent	Mean	Range
Deployment Dates				
(DD/MO/YR)	11		129 days	34-155 days
02JAN05-10MAY05 (129d)	1	9.1%		
05JAN05-05MAY05 (119d)	2	18.2%		
05JAN05-08JUN05 (155d)	4	36.3%		
31JAN05-?APR05 (90dmax)	1	9.1%		
31JAN05-08JUN05 (129d)	1	9.1%		
?MAR05-08JUN05 (100dmax)	1	9.1%		
02APR05-05MAY05 (34d)	1	9.1%		
Age (During OUA)	11		38.1 years	23-51 years
23-24	1	9.1%		
28	1	9.1%		
33	1	9.1%		
36	1	9.1%		
39	1	9.1%		
40	2	18.2%		
41	1	9.1%		
42	1	9.1%		
46	1	9.1%		
51	1	9.1%		
Rank (During OUA)	11		O3 Lieutenant	O1-O5 Ensign
O1-O2	2	18.2%		to Commander
O3	3	27.3%		
O4	5	45.4%		
O5	1	9.1%		
Years as an RN (During OUA)	11		11.6 years	2-26 years
2	1	9.1%		
2-3	1	9.1%		
4	1	9.1%		
9	1	9.1%		
11	1	9.1%		
12	1	9.1%		
13	1	9.1%		
14	2	18.2%		
20	1	9.1%		
26	1	9.1%		

Table 2

Demographic Information- Years of Military Service, Gender, Ethnicity, Education, and Role

	Number	Percent	Mean	Range
Years of Military Service (OUA)	11		14.5 years	0-23 years
0-1	1	9.1%		
9	1	9.1%		
10	2	18.2%		
12	1	9.1%		
16	1	9.1%		
18.5	1	9.1%		
19	1	9.1%		
20	1	9.1%		
22	1	9.1%		
23	1	9.1%		
Gender	11			
Female	6	55%		
Male	5	45%		
Ethnicity	11			
White/Caucasian	9	81.8%		
Black/African American	1	9.1%		
Hispanic/Latino	1	9.1%		
Highest Level of Formal Education	11			
BSN	3	27.3%		
BSN + Masters Coursework	2	18.2%		
Masters	6	54.5%		
Primary Clinical Role (During OUA)	11			
Triage (Leadership)	1	9.1%		
Casualty Receiving	2	18.2%		
Perioperative (Leadership)	2	18.2%		
Perioperative (Staff RN)	2	18.2%		
Medical-Surgical (Leadership)	1	9.1%		
Medical-Surgical (Staff RN)	1	9.1%		
ICU (Leadership)	1	9.1%		
ICU (Staff RN)	1	9.1%		

Table 3

Demographic Information- Prior Enlisted Service, Military Deployment, and Humanitarian Training

	Number	Percent	Mean	Range
Prior Enlisted Service	11			
Yes	6	55%		
No	5	45%		
Prior Military Deployment as RN	11			
Yes	1	9.1%		
No	10	81.9%		
Prior Military Humanitarian Training	11			
Yes	0	0%		
No	11	100%		

was attributed to the fact that six of the 11 participants had prior military service and they served as enlisted sailors before their commissioning as Naval Officers. A majority of those with enlisted service were in the US Navy mostly as hospital corpsmen. The others served in the US Air Force as medics. Military years of service ranged from no experience to 23 years of experience. The study participants were 45% male and 55% female, differing from the 37% (1,088) males and 63% (1,846) females that made up the Navy Nurse Corps at the end of fiscal year 2005. The study participants' ethnicity was predominately White/Caucasian at nine and 82% of the sample of 11. There was one Black/African American Navy nurse and one Hispanic/Latino Navy nurse in the study sample. In 2005, the Navy Nurse Corps population numbered 2,934 strong and consisted of 74% (2,160) White, 12% (344) Black/African American, and 12 % (160) Hispanic (V. Morrison, personal communication, November 8, 2006). A majority of the study's participants had a Masters degree- six or 54.5%. Only 32% of the Navy

Nurse Corps at the time were Masters prepared. The required educational level for Navy nurses is at minimum a bachelors degree.

The study's participants were highly educated and clinically strong. All were assigned to their clinical areas of expertise when deployed aboard the USNS MERCY. The participants reported being assigned to several units during deployment, four were assigned to the Operating Room (OR), two to Casualty Receiving (CasRec), two to the Medical-Surgical ward, two to the Intensive Care Unit (ICU), and one to the Triage services. Five of the 11 participants served as Unit Charge Nurses or Managers, what is known as the levels of Division Officers or higher Department Heads in the Navy. The participants identified many jobs they filled during the mission, jobs such as Triage Officer, bedside or unit nurse, Department Head, Division Officer, Charge Nurse of several wards, Navy Liaison, ashore educator, and more. Historically known as "Jacks of All Trades," the Navy nurse participants also functioned in ambulatory nursing roles. Specifically, they gave immunizations, ran sickcall triage clinics, assisted with ambulatory care surgeries, assisted in dental clinics, dispensed eye-glasses, provided wound care and dressing changes, and taught host nation nurses, physicians, and citizens.

Only three of the 11 had reported ever deploying as a Navy nurse. One participant was involved in providing disaster relief and humanitarian aid after a 1999 earthquake in Turkey. Two of the participants had participated in the 2006 humanitarian assistance mission aboard the USNS MERCY. Only one participant had deployed with the Marines as a hospital corpsman. None of the study's participants identified attending any training for disaster relief or humanitarian assistance. None reported attending any military humanitarian courses such as the US Navy's Military Medical Humanitarian Assistance Course (MMHAC) offered by the Uniformed Services University of the Health Sciences School of Medicine (USUHS) and

Department of Pediatrics since 1998. This course was created to provide training for "military primary providers in preparing for and executing appropriate medical care to civilian populations in the austere health emergency setting" (OUSUHS MMHAC Course Manual, p. iv).

Data Collection Procedures

Setting (Facilities for Data Collection)

The participants chose the site for the data collection. Private rooms conducive to quality tape recording conditions were recommended.

Order of Administration of Measures

The order of administration of measures were as follows: (1) consent form (see Appendix E) ; (2) demographic form (see Appendix H); and (3) interview questions (see Appendix I). Appendix J).

Data Collection and Recording

These following steps were taken in the collection of data:

1. The researcher arrived and set up two tape recorders, pens, and paper.
2. The researcher reviewed the research study description and explained the consent form to the participant.
3. The researcher answered all of the participant questions.
4. The researcher obtained the participant signature on the consent form.
5. The researcher gave a copy of the consent form to the participant.
6. The researcher reminded participant:
    a. Not to use identifiers during the interview.
    b. Not to discuss classified materials during the interview.
    c. The voluntary and private nature of the interview.

d. The availability of emotional support if desired.

7. The researcher gave the demographic form to the participant to complete.
8. The researcher gave a copy of the interview guide to the participant, if desired.
9. The researcher obtained permission to take notes and perform a quality audio check on the tape recorders.
10. The researcher obtained permission to begin the interview process, reiterating that it might take one to two hours.
11. The researcher started the semi-structured interview using the latest version of the interview guide (probes were sometimes changed, based on data analysis).
12. The researcher periodically checked the presence and quality of the audio taping (discreetly - between interview questions).
13. At the end of the interview guide, the researcher asked the participants if they could think of anything else they would like to include and if they had any questions.
14. The researcher collected all extra forms, equipment, and paperwork at the end of the interview.
15. The researcher thanked the participant and gave an estimated timeframe as to when the participant would receive copies of the interview transcripts via mail for an accuracy check (member checking).
16. Upon exiting the interview site, the researcher recorded (either by writing, using a code-protected computer program, or audio tape) observational field notes and memos regarding the interview process within two hours of the interview (journaling of the process).
17. The consent form was placed in the assigned locked file cabinet.

18. Identifiers were removed from the demographic form and audiotape and assigned corresponding codes. Corresponding assigned code numbers were placed on the consent form, demographic form, and audiotape. The consent and demographic forms were kept in a key-locked file cabinet. Only the researcher had access to the key-locked cabinet.
19. The researcher stored audiotapes and transcripts in separate key-locked file cabinet.
20. Data analysis memos, observational and theoretical notes were kept on a password-accessible portable computer flash drive, and hard copies were kept in the key-locked file cabinet, along with the audiotapes and transcripts.
21. The tape recordings were transcribed.
22. The transcribed copies were reviewed and compared with the audiotapes for accuracy.
23. The participants were mailed copies of their interview transcriptions and asked to contact the researcher within a week if they wanted changes, or information added, or if they wanted data clarified.

Data Analysis Procedures

As outlined by Strauss and Corbin (1990, 1998), the following steps were taken during data analysis:

1. Open coding - Open coding is "the analytic process through which concepts are identified and their properties and dimensions are discovered in data" (Strauss & Corbin 1998) (p. 101). Analysis of data starts as early as data are collected. The researcher examined each line of data to define and categorize information through open coding. The researcher then focused on the participant's view of reality through line-by-line coding. Once data are divided into segments, they are re-examined for commonalities that reflect categories or themes (Leedy & Ormond, 2005). Once the data were categorized, they were examined for properties such as specific

attributes or subcategories. Throughout the process of data being categorized and coded, data were also compared to incoming data (constant comparative method). Analysis techniques included: analysis of a word, phrase, or sentence; analysis through making comparisons; and the use of questions. According to Strauss and Corbin (1998), these techniques help carry out the steps of theory building - "conceptualizing, defining categories, and developing categories in terms of their properties and dimensions - and then later relating categories through hypotheses or statements of relationships" (p. 121).

2. Axial coding - Axial coding is "the process of relating categories to their subcategories, termed 'axial' because coding occurs around the axis of a category, linking categories at the level of properties and dimensions" (Strauss & Corbin (1998) (p. 123). Among categories and subcategories, interconnections were made. The focus of this step was to "determine more about each category such as: the conditions that give rise to it; the context in which it's embedded; the strategies that people use to manage it or carry it out; the consequences of those strategies" (Leedy & Ormond, 2005, p. 141). In axial coding, data was reassembled in new ways so that there were connections between a category and its subcategories (Charmaz, 2000).

3. Selective coding - Selective coding is "the process of integrating and refining theory" (Strauss & Corbin (1998)(p. 143). Also known as focused coding, selective coding was more conceptual than line-by-line coding, and the initial codes that more frequently appeared before were now used to sort large amounts of data (Charmaz, 2000). Glaser's question "What is happening?" was answered through the categories and their interrelationships. A story line describing what was happening formed (Leedy & Ormond, 2005). During selective coding, Strauss and Corbin discuss the "conditional matrix as an analytic diagram that maps the range of conditions and consequences related to the phenomenon or category" (as cited in Charmaz, 2000,

p. 516). The matrix is described as a series of circles with the outer rings representing conditions and consequences that are most distant from the actions and interactions related to the phenomenon, while the inner rings are closest to actions and interactions related to the phenomenon.

4. Development of a theory – The development of a theory is where a theory that explains the phenomenon being studied emerges in the form of a "verbal statement, visual model, or series of hypothesis" (Leedy & Ormond, 2005, p. 141).

Chapter Summary

Grounded theory methodology (Strauss & Corbin, 1990, 1998) was used to develop a grounded theory on the military nurses' experiences in Operation Unified Assistance aboard the USNS MERCY. The research design, methodology, protection of human rights, sample, data collection procedures, and data analysis procedures were described.

CHAPTER 4

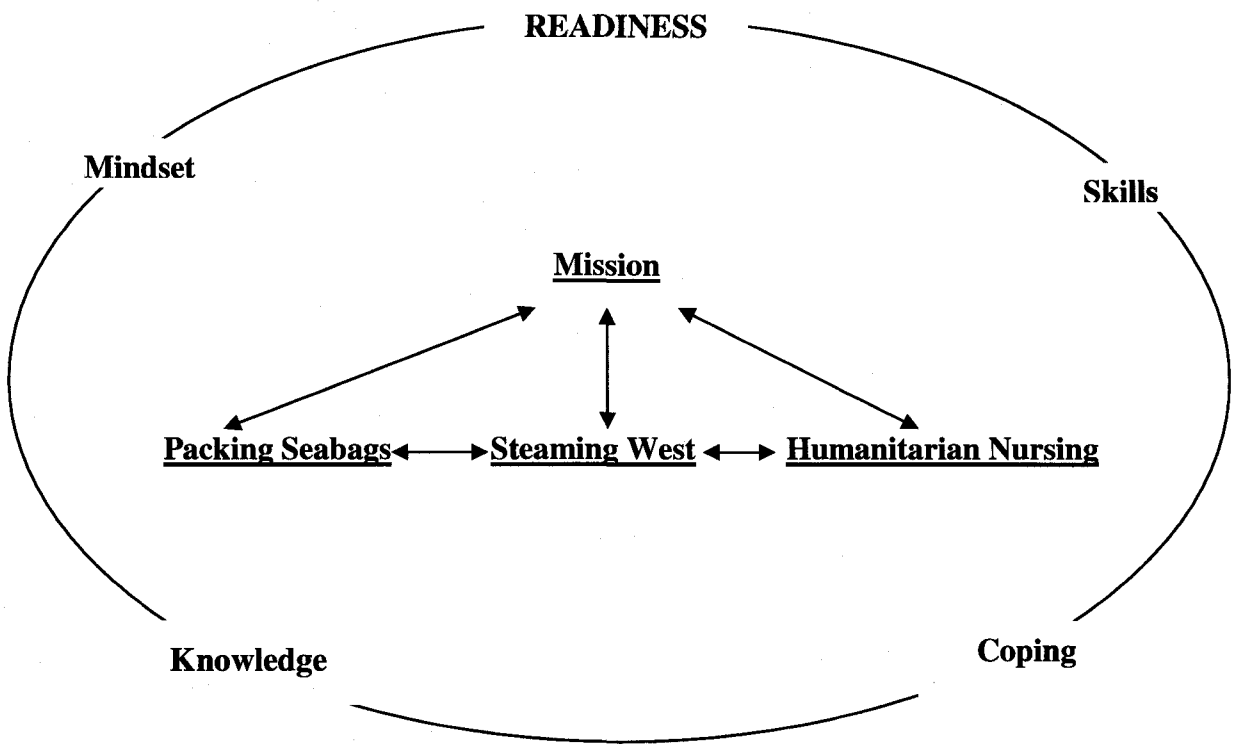
Findings

Readiness emerged as the most salient dimension and core category of this study. A theoretical model was developed to illustrate how Navy nurses experienced the readiness of Operation Unified Assistance through roles they served and relationships they encountered (Figure 1). Readiness was the overarching theme and was instrumental for the participants during their journey - from packing seabags, to steaming west, to engaging in humanitarian nursing. Adaptive mindsets, knowledge, skill sets, and coping mechanisms contributed to mission readiness and proved significant in helping participants overcome challenges faced during different phases of the mission.

Readiness, as defined through performance, was influenced by each individual's abilitiy to be prepared for the mission at hand. When prepared, participants responded by navigating and negotiating their various roles and relationships; this led to optimized readiness- accomplishment and contentment. When unprepared, unresolved reactions to circumstances occurred, leading to distress, conflict, and disconnectedness. As much as the participants tried to adapt, cope, and accommodate, some situations were too difficult to process with their current mindsets, knowledge, skill sets, and coping mechanisms. Although few participants reported an inability to cope, some found situations for which they were unprepared and were unable to adjust, which is likely cause for concern more than one year after the deployment.

Figure 1

Navy nurses' experiences of the OUA mission aboard the USNS MERCY



The Mission as Context

The five-month-long OUA mission was carried out in four phases constituted by either an Operation Unified Assistance (OUA) disaster relief mission or a Theater Security Cooperation Program (TSCP) humanitarian aid mission. In chronological order, the stages unfolded as: (1) OUA I, tsunami disaster relief in Banda Aceh; (2) TSCP I, humanitarian assistance in Alor, Indonesia and Dili, East Timor; (3) OUA II, earthquake disaster relief on Nias Island; and (4) TSCP II, humanitarian assistance in Papau, New Guinea. Participants were aboard the USNS MERCY at varying times and fulfilled various roles during the mission. Throughout the

deployment, they engaged in different jobs and relationships and encountered similar challenges and difficulties. While the overall vision for the mission was one of ambassadorship to "do good things" and "teach others how to fish," several overriding challenges were recognized by USNS MERCY executive leadership and corroborated by study participants. Challenges included: unclear mission specifics, changes in command and control, inadequate manpower, poor ship-to-shore communications, inadequate supplies, difficulty in transporting patients from helicopters and boats, and lack of continuity of care ethical dilemmas (Comlish, 2005). It should be noted that while originally unclear, the OUA mission evolved to encompass the following: "save lives, reduce suffering, and improve public health in designated affected areas - and upon completion of the tsunami relief effort, conduct general humanitarian assistance and medical engagement missions en route homeport" (Comlish, 2005).

Study participants reflected upon their experiences, recounting their responses and reactions to their roles as Navy sailor, Navy nurse, Naval Officer, and Ambassador of the U.S. They also shed light on their relationships with others, highlighting how they communicated, collaborated, and worked with patients and their families, translators, NGO nurses from Project Hope, and hospital corpsmen. Overall, the participants fondly gave accounts of their readiness to meet the mission and accomplish tasks.

A Rewarding Experience

Experiences aboard the USNS Mercy during Operation Unified Assistance were repeatedly described by participants as rewarding - the highlight of their careers. Positive superlatives were consistently used. The mission was an opportunity they would never have the opportunity to achieve again - in America, or in their lifetime. They praised the deployment as

"one of a kind" and "like no other experience." One senior participant typified the response in stating:

> It was a lifetime of experiences, things that you will never see again. Some of the diseases and things that you see there you'll never see in the United States, some of the worms and different things. I mean it was different. We were removing worms from intestines that were three, four feet long, we [saw] elephantitis, we [saw] goiters so huge on people's neck that you couldn't even tell they had a neck...It was an experience.

Participants reflected upon their OUA experiences and echoed common sentiments, such as the deployment helped "open my eyes to just the way the world really is." One Navy nurse marveled at how the OUA mission changed a personal outlook on life:

> Every day...was just so, so incredible...it makes you look at life differently...it was a sign for me that I've got a bigger purpose...and I felt good about it...I think my outlook on life is a little different...I don't stress as much...I don't know if you want to say grounding or that's what it left me with, a kind of like, 'What's really important in life?'...A very big peace...and it left me with a curiosity of wanting to know other cultures and other places in the world and wanting to be around it.

Several participants expressed that the mission was life-altering, that it truly changed their perspectives on many issues. Each phase of the mission was found to be fulfilling. The humanitarian nursing stage was thought to be particularly rewarding and is now considered by some OUA-veteran nurses as their calling in life. Many have decided to do humanitarian nursing upon retirement from the Navy in an effort to give back to society and humankind.

Packing Seabags

The study's participants described their experiences as they prepared for the mission. Within days of the December 26th, 2004 tragic tsunami, Navy personnel received the call to man the MERCY. Many participants received notice only two to three days before the MERCY was to set sail; notification ranged from one day to one week. One Navy nurse permanently attached to the MERCY was considered dedicated crew and part of the reduced operating staff (ROS crew), and was assigned to the hospital ship when home-ported in San Diego. Others were assigned to the hospital ship as their operational platform while being assigned to the Naval Medical Center San Diego. Some of those participants had been aboard the MERCY for orientation courses and training exercises. Still others had never been assigned to the MERCY as an operational platform and thus were not oriented to the hospital ship; these participants were assigned to other units, such as with the Marines and on Navy ships. While not ideal, short notice to deploy is commonplace in the military, particularly in emergent situations. The Navy's expectation that sailors always are prepared for deployment - literally and figuratively with their seabags packed - was supported by all Navy nurse participants; they described what had helped them to ready for the mission, identifying what seabag items were required of them as sailors.

For the current study, the nurses recounted their experiences once they were notified they were chosen for deployment. With such short notice, they spent most of the time packing their seabags with the right shipboard uniforms. One participant spoke of comrades who "weren't part of the MERCY platform...so in three days [they] had to go from cami-wearing [operational platform with the Marines] to a coveralls-wearing [operational platform with Navy] person..." Still others who were in nursing leadership positions at the hospital had to find time to quickly turn over their nurse manager and administrative jobs to successors. Those who joined the

MERCY after it had left San Diego found it beneficial to get tips on what to pack. One participant who deployed later explained, "When I was going, they emailed and said, 'bring this, this and this...one of 'em was a drug book and one, you know, some other reference type stuff..." Four of the eleven nurses relied on past experience as prior enlisted Navy sailors, and for them, seabags were always packed, ready, and good to go; they attributed their service prior to being commissioned as Naval Officers as the most important allies to optimal readiness. In fact, all participants reported they already had their seabags packed with wills, powers of attorney, and the mental understanding that being called up for deployment was part of being in the Navy. They noted that the needs of the Navy superceded their own. For the most part, participants reported that when they received word that they were selected to deploy, all they had to do was pack their seabags with only a few remaining items such as regulation uniforms, personal items, and family photographs; they also spent whatever little time they had with their families. One of the seasoned nurses discussed preparing for the mission, relating that the packing of a seabag meant more than just putting together physical supplies; the nurse described the mindset needed to deploy:

> You got to let people have their say and say, 'Look, we're here in the Navy. We're here to do a job...and we're doing good things...But I think that's just part of being in the Navy. You know you're never home 'til you're home. You know you never leave until you leave. That mentality you live with...you push on...you do what you got to do.

This nurse went on to comment that Navy nurses "...are pretty well trained...and we are more flexible because that's part of our nature...We know every three years we're going to a new duty station...we are mission-focused. This is what you had to learn as a Navy person."

When asked, the participants stated they had not attended any special disaster relief or humanitarian training prior to the OUA deployment. Most also did not have time to prepare for the deployment by reading up on the tsunami-ravaged countries. Once on the MERCY, several talked about attending medical intelligence briefs, which provided overviews on epidemiological and cultural matters. Due to the urgency of the mission, none of the participants were able to specifically update their clinical skills for this disaster relief effort. Instead, they relied on current and past clinical skills and knowledge sets.

One participant was uniquely ready for the mission; as the only one who had deployed as a nurse before the OUA mission. The nurse had been deployed to a military operation other than war - a mission to provide disaster relief and humanitarian aid in response to a devastating earthquake in Turkey. This prior experience was critical in preparing the nurse mentally for the OUA disaster relief mission. The nurse described the mindset needed for the OUA tsunami relief mission:

> The unknown factors [were] exactly the same as the earthquake [disaster]. I think all the humanitarian missions, when a catastrophe strikes, you just go to help, but you don't know how help is going to be defined until you get there and actually start doing it. Sometimes it's not defined until after you're done, but that's very similar for all humanitarian missions. You go and you do whatever you can, whatever the country wants you to do. Try not to be too intrusive, but help as much as you possibly can...You never know what you're going to be doing and you never know how long you're going to be there. It's kind of, do as it comes along...[You] have to be flexible with the humanitarian mission.

This participant shared the past humanitarian deployment experiences with staff, teaching lessons learned and helping everyone to cope with the deployment's uncertainties and, at times, chaos. This nurse also described how past deployment knowledge helped put the current OUA mission experience in perspective:

> I think prior experience was my biggest ally. The fact that I'd been to that earthquake in Turkey and I could see the similarities so I was able to feel like, 'Well, this isn't crazy.' It's actually normal for this sort of a mission, and I could get a little bit more comfortable with the craziness of it.

Steaming West

Several participants experienced the next phase of the mission when the USNS MERCY left homeport of San Diego, California to head west for Indonesia. When called to deploy, the mission's objectives were not fully defined. "Head west and do good things" were the MERCY's marching orders. The ship's Commanding Officer took a customer service approach and encouraged staff to offer assistance, "Here's what the MERCY can do. How can we help you?" That philosophy prevailed in the participants' stories, however, some of the participants wanted more clarity, and on the sail out to Indonesia, some Navy nurses were frustrated by the inexactness of their upcoming duties. The mission eventually evolved to, "Conduct humanitarian assistance and disaster relief operations in support of tsunami relief; save lives, reduce suffering, and improve public health in designated affected areas; upon completion of tsunami relief effort, conduct general humanitarian assistance and medical engagement missions en route homeport" (Comlish, 2005). The participants who boarded the hospital ship at the beginning of the OUA mission rode the MERCY from San Diego as it steamed towards the tsunami-ravaged countries.

They admitted early on to taking on the Navy Medicine's motto and the mindset of "Standing by, ready to assist."

By the nurses' accounts, it took approximately 30 days to reach Indonesia. During this time, the MERCY crew awaited authorization to act from the Indonesian government. Aboard the "float out" steaming west, study participants spoke of long, hard work hours getting the ship ready: cleaning; organizing; going through old equipment and supplies; preparing equipment and supplies for possible clinical case scenarios; and preparing for trauma, pediatrics, and worst case scenarios. The operational tempo was typically described by one of the nurses as "we worked long 45 days, seven days a week before we had a day off; I mean we worked constantly...all day long." Another nurse described the experience of leading 15 Navy nurses and hospital corpsmen during this time:

> [I had to] rally up the small number of people that we had...who then had to start doing that top to bottom setup for patients, and it has to also be setup for all ages of patients and trying to do culturally sensitive care, so, learning how to understand the culture we thought we were going to be going to...[When] we all pulled out. We were very excited to being able to go help. I think that the hardest, hardest thing was sailing away, and then when we finally turned back from looking at our families and crying all those tears, to looking at our task at hand, to realize how long that ship had sat and how it was not equipped to probably even do its primary wartime mission with the equipment that was physically onboard, because there was so much stuff that people had kept. It was sort of the floating warehouse.

Despite rarely having a day off, the participants who sailed the MERCY out of San Diego fondly recalled the deployment's early beginnings. Each told of experiencing the grueling work

required to get the ship ready for an uncertain patient caseload and workload. These nurses were prepared for the difficult work and uncertain mission by employing their "needs of the Navy come first" mindsets and peer support. One participant explained how they coped and got the arduous tasks done. By befriending Navy nurse and physician colleagues, camaraderie helped participants adapt to the difficult work and evolving mission. One nurse said:

> The float-out was a very small corps of military nurses. We really bonded well together, and the ship was ready to go into the yard period, so that meant unpacking the ship, cleaning the ship...it was amazing the amount of stuff that was just sitting there that we had to unload.

Another participant also described how the job got done:

> We [Nurses] talked about everything! So that was good, and the doctors even, got down and swabbed the decks and cleaned the toilets and stuff while we were waiting for patients, so that built a lot of camaraderie.

In the beginning, these nurses coped with the frustration of unclear mission objectives by asking questions of their Chains of Command, their supervisors; nonetheless, they recognized the objectives were unclear because the MERCY crew had not received authorization from the Indonesian government to provide care. Over the several phases of deployment, the mission objectives unfolded. Most participants were in their mid-level to high-level nurse leadership positions, and they communicated the mission's evolution to their subordinates. They helped their staff by answering questions, keeping lines of communication open, facilitating the ventilation of feelings, and fostering coping mechanisms. The participants themselves identified additional personal coping mechanisms, such as seeking camaraderie, using email and telephone communications to family, journaling, praying, and exercising.

Humanitarian Nursing

The retelling of the many experiences regarding this mission by most participants was in relation to their involvement in humanitarian nursing. As they engaged in this phase, their readiness to complete the mission emerged. Their mindsets, knowledge, skill sets, and coping mechanisms contributed to their readiness, and these attributes were significant in helping participants overcome challenges and difficulties they faced during this phase.

Overview Description of Humanitarian Nursing

During the disaster relief phases of the deployment (OUA I and II), humanitarian nursing was surgically-driven and surgically-dependent on postoperative inpatient nursing. When these Navy nurses arrived in Banda Aceh, Indonesia, they not only provided surgical nursing services aboard the MERCY, they also provided educator services ashore in Banda Aceh's Abidin Hospital, local military hospitals, and field hospitals. After a less than two month OUA I phase, the MERCY Navy nurses described their travel to Singapore; Alor, Indonesia; and Dili, East Timor where they delivered TSCP I humanitarian nursing services. These services were abruptly stopped when the MERCY was turned around to respond to nearby Nias island's devastating earthquake. The 8.7 magnitude earthquake set off the MERCY's OUA II disaster relief efforts. Since the MERCY was geographically nearby, she was off the coast of the Nias island disaster within a week. Relative to the tsunami disaster relief efforts, the MERCY arrived to more immediate injuries. The Nias island earthquake killed hundreds and caused massive infrastructure damage. Most participants experienced their clinical nursing roles in the perioperative, recovery, and medical-surgical wards. This bedside care differed from the community health care they provided during the humanitarian relief phases, TSCP I and II.

During the deployment's humanitarian aid phases, nursing practice focused mainly on the provision of health education services and ambulatory care.

Humanitarian Nursing During OUA I and II

Upon reaching Banda Aceh, Indonesia, a participant said: "It was put out by Jakarta radio...'Go to this hospital...in Banda Aceh, because the Americans are providing free care..." Without government-funded socialized medicine, all healthcare services charged a fee for service; a large majority of the people did not seek preventive care because they were too poor to afford it.

The Navy nurse who had previously been deployed during a humanitarian mission described the OUA I mission in Banda Aceh, recounting the following:

> I felt like being in a humanitarian mission, we're going to do the humanitarian thing and that's to help anyone whatsoever. We're not helping them so much as we're helping the medical system that was a victim of the tsunami, [since] the whole hospital was wiped out.

During the OUA I part of the mission, another participant described the chronic medical and delayed surgical nursing care required:

> By the time we got to Banda Aceh, it was 30 days out from the tsunami...the golden hour or month of trauma had gone by. We were mostly getting patients...a lot of growths, tumors, or chronic illness, chronic injuries because it was a third world country that they couldn't get them fixed and we were there so we could fix it. Or a lot of fractures that had healed inappropriately from, maybe from the tsunami that we were now fixing. We got very few, only a few, who were truly tsunami related- like tsunami lung. [We were] taking care of delayed healing, wounds, and things that didn't heal...nothing that was

fresh or immediate or required immediate care because those people had already been taken care of by the [other international agencies] that were there or they had been shipped to another town. So most of our work was pretty much humanitarian things-taking care of fractures, injuries, goiters, cancers, tumors, things like that.

Still another participant agreed and echoed the sentiments of the group of Navy nurses, describing OUA I as:

In the beginning was very ortho heavy, and then as time went on it because more soft tissue, tumors, and things like that, so it did change a little bit. It became a lot of more big interabdominal tumors...after...the tsunami orthopedic injuries.

One participant experienced the role as Navy nurse as a perioperative clinician ashore:

I got to do surgeries ashore [in Banda Aceh], how primitive things were...they had one operating room that had two tables. In America, that's unheard of to this day and age. Everyone has their own operating room...they had one anesthesia machine that they would somehow share.

The nurses frequently talked about how much the standard of care in the host nations differed from the American standard of care. While providing care in the host nations, the participants and their MERCY colleagues supported the host nation's standard of healthcare. However, when patients were brought back to the MERCY, the standard of care was the American standard of healthcare.

During OUA I, the participants described the intense workload as clinicians. One nurse recounted, "Days you would work 15, 16 hours, you'd go lay down for a few hours and then come back to work." Another nurse described the operational clinical nursing tempo:

We averaged probably about 25 patients in Ward One and about 15 to 25 patients on the

other floor...sometimes we had three or four nurses on a shift...so they'd each have maybe eight or nine patients and then they had a corpsman...all paper documentation...urology, GYN, head and neck, post-ops, orthopedics, pediatrics, cataracts...average length of stay- I think we actually figured it out...probably four to five days average.

During OUA II phase of the mission, the participants provided more immediate disaster relief to the Nias earthquake survivors. One described the experience as:

When we got to Nias, there were still a couple of other different countries there that had set up different volunteer organizations. We were seeing things on the ship that they couldn't fix on shore...our ship was probably the most advanced ship there, with the most technologcy that no one else had...CT scans and all different types of xrays and ultrasounds that needed to be done before people would do procedures.

During the OUA II part of the mission, the participants delivered more disaster relief nursing since they were on scene sooner. Some enjoyed this phase more than other phases because they were able to provide more direct care because a second wave of NGO nurses had not arrived yet so they were able to provide more 1:1 bedside nursing services.

During OUA I and II, the Navy nurses who went ashore to provide educator services in their Navy nurse role were Clinical Nurse Specialists. These nurses described their skills and knowledge as certified instructors and patient educators. They spoke highly of their mission experiences ashore. Specifically, a Navy nurse shared her experiences as an educator, describing teaching at one of the Indonesian military hospital during OUA I. Much like the other nurses' experiences as educators, her educational approach was focused on the host nation healthcare providers' needs. Learning assessments were conducted by asking: "What do you need us to do

and to help with?" The unique aspect of this participant's teaching experience was that she insisted on taking a small team of educators out to the hospital for several days to build rapport, facilitate trust, and provide appropriate and sustainable education. She and the team first assessed what the providers wanted to learn. They humbly addressed the host nation providers, not wanting to impose and come across as, "Here we are, the big Americans! We are here to do whatever..." Instead, the focus was on learning needs assessment and rapport building, asking the providers, "How can we help you? We're here to help. What do you need?..." The attitude was not to "throw them fish," we taught them "how to fish."

This Navy nurse and a respiratory therapist colleague taught nurses and physicians CPR and airway management. The host nation providers were excited to learn, and they even changed their clinical practice based upon the instruction they'd received. After an inservice on airway management taught by a nurse and the team, one Indonesian military nurse recognized a compromised patient's worsening respiratory distress and emergently intubated the patient. "See what I did!" the nurse exclaimed when the patient went on to live.

Other participants' educator roles were described as more sporadic, wherein they provided services at different facilities, rotating nurses from the MERCY to the shore to teach the host nation providers about cardiac monitoring, signs and symptoms of shock, CPR, ACLS; nursing practices in the U.S. Continuity of care was less apparent.

Humanitarian Nursing During TSCP I and II

The mission's Theater Security Cooperation Program's (TSCP) first phase took place en route from OUA I to return to home port in San Diego. Some of the participants provided nursing and educator services in Alor, Indonesia and Dili, East Timor. TSCP I was interrupted by the Nias earthquake and OUA II. After OUA II, some nurses provided clinical and educator

services in Madang Province in Papau, New Guinea. More participants had an opportunity to go ashore in these humanitarian relief efforts. One nurse described the role as educator as being a "Jack of all trades...handed out meds, pulled teeth, whatever the providers in the clinics wanted." Other nurses described clinical activities, such as performing physical assessments, triage activities, giving immunizations, assisting in dental clinics, handing out glasses, and providing care in the host nation hospital's PACUs, ICUs, and medical wards. Nurse educator services included providing instruction to host nation nurses, nursing students, and physicians in CPR, EKG monitoring, wound care, basic suturing, outpatient surgeries (cataracht removals, hernia repairs, wound wash outs), and basic nursing topics. The educators also taught host nation healthcare providers and some of the host nation citizens about nutrition, HIV awareness, female hygiene, and other public health issues. One participant summed up the experience as:

> When we went there, we didn't go and force anything upon them. It was always asked. Everything we did from medical nursing care, from...doing surgery, we always asked. And that was one thing we wanted to make sure is that we want to...help the host nation [nurses, physicians, healthcare providers] take care of its people. We don't want to [just] help the people. So the host nation asks us to do whatever we can [to multiply the skills of their healthcare forces].

Humanitarian Nursing Clinical Expertise

Across the mission's humanitarian nursing phases, participants relied on some basic nursing skills. They described their clinical roles as humanitarian nurses, identifying what knowledge and skills they used. Most relied heavily on their current clinical bedside competencies and past experiences as Navy nurse generalists or prior enlisted hospital corpsmen/medics/surgical technicians. As previously mentioned, the participants were placed in

jobs where they had proven clinical proficiencies and expertise ranging. These nurses reported having anywhere from two to twenty plus years of nursing experience. They were appropriately assigned to workspaces based on their clinical skills and knowledge. The philosophy to "play to their full strengths" was aptly carried out when the participants were assigned to their workspaces. Because of their strong clinical skills, these participants were also assigned as the Military Liaisons in their workspaces. In this capacity, they took on the responsibilities and functions of ward nurse managers- similar to the roles of Navy Division Officers and Department Heads. Within these leadership roles, they facilitated communications, operations, and administration of the clinical wards and units. Some even remarked that they may have been chosen to deploy aboard the MERCY because of their clinical expertise, despite their not being assigned to the hospital ship as an operational platform. All participants proudly reported they had the past experience and current clinician/clinical leader skills to function well as bedside nurses, charge nurses, clinical educators, and nurse managers in their assigned inpatient units. Ashore, the participants also were prepared to get the mission done in their roles as ambulatory nursing clinicians and community/public health educators.

One participant described what the mission required of Navy nurses. Deployed during the OUA mission and the subsequent 2006 humanitarian nursing mission aboard the USNS MERCY, this participant described the clinical skills and knowledge sets required in humanitarian nursing:

> I think you just have to be well-rounded...I think because when you get out here you may have been...the chemotherapy nurse at Balboa, but you get out here- One, you're not getting chemotherapy, and two, you better know how to work the wards...because that's where the majority of the nursing care that's non-surgical [is]. I mean, you have your OR

nurses who did the OR stuff, but everyone else, you have to be well-rounded. You have to be able to take care of...there was combined wards, so you had to be able to take care of, you know, six-week olds to 80-year olds. You just – I could not stress that enough from a nursing standpoint. Even from an OR nurse standpoint. Being able to do pediatric surgery, orthopedic surgery, um, general surgery – you have to be well-rounded no matter what your specialty is...our job is to take care of the war fighter and to win a war, and right now we're on war against terrorism...so we need to...train our people to be well-rounded and not just go into pediatrics and say, 'Okay, you're a pediatric nurse', and that's it. I think you have to remember that even as we get – progress through our careers, that we have to keep our skills up and we have to be well-rounded because, like, you may be – find yourself as a Commander working the wards on one of these missions...it's great to be an administrator, but...time comes for deployment, your administrative skills is not what's going to help save lives. It's going to be your clinical skills.

This participant recognized that specialized nurses or clinically rusty nurses had to be retrained. Although slow at first, with the proper training, these nurses were able to provide basic nursing care. Another nurse corroborated the belief that clinical proficiency across the continuum of care was vital to mission completion and provision of quality nursing care:

Out on a ship or being deployed, you are a nurse. Whatever your specialty, it goes by the way-side. You work where you're needed, you do what you need to do to make the mission complete. We not only did OR nursing, we went out on the ward and worked. We'd go to the ER and do things, we helped in the lab, you just do whatever needs to be

done...Being a military nurse and being a well-rounded nurse...wherever you do nursing, it may not be in a hospital or a ship, or it be on land, nursing is nursing... military nurses work where you are needed and you don't have so much a sub-specialty...you [Navy nurses] are a basic nurse before you specialize...that was a benefit out there to be a basic nurse.

Although not all participants were originally assigned to the hospital ship as an operational platform, they nevertheless acclimated to the hospital ship and its operations through shipboard orientation and unit-specific training (which included training on shipboard biomedical equipment and paper charting). The participants identified the skills they found most helpful in providing quality patient care. They included: ability to remain calm, flexible, culturally sensitive, and diplomatic; skill in mediating and resolving conflict; ability to stay physically fit; ability to care for patients of all ages; ability to stay well-rounded with current clinical experience; skill in appropriately placing nurses in work spaces that matched their clinical strengths; and ability in retaining basic psychosocial assessment and medical-surgical nursing skills.

Humanitarian Nursing Challenges

Pediatric nursing. While engaged in the humanitarian nursing stage of the mission, study participants experienced challenges. They identified resources they wish they'd had and dilemmas they'd faced. All participants unanimously expressed that they had approached the mission without adequate pediatric nursing skills and appropriate supplies. Most experienced distress and discomfort when limits were placed on the delivery of healthcare services- limits which included time constraints and denial of services due to lack of continuity of care ashore.

Below are descriptions of how participants coped with the challenges of pediatric nursing care, supplies, and ethical care dilemmas during the mission to prevail to readiness.

Participants noted that they wish they had had more pediatric nursing resources. One nurse described the challenge and the coping mechanisms put into place:

> I think that the toughest thing for everybody when they were taking care of the kiddos in the ICU and you didn't have PICU nurses. You know, there was no mistakes made or anything like that, but it was just the comfort level, I think, for people...I tried to put different people with different specialties on the shifts, so that I always tried to have someone with at least a little bit of peds on a shift.

Having only a few pediatric nurses to pull from, participants coped creatively by employing a quality spread of experts across the staffing schedule; conferring with specialty pediatricians who would spend the night in the ICU when there were critically ill children on the unit; and relying on Navy nurses' past pediatric nursing experience and relocating them from their primary workspaces to the ICU when needed. One participant also described clinical experiences while engaging in humanitarian nursing:

> The kids. For sure. The babies, taking care of the babies, the babies dying. Just everything with the babies. Which, it was awesome to have the experience to take care of them but definitely was not prepared. I am not a PICU nurse and there were in services and the pediatric intensive care docs did a great job of making us feel comfortable, or doing the best they could to make us feel comfortable. But I was definitely not prepared for pediatrics.

Some of the Navy nurses verbalized the difficulties they experienced when children died during the mission. One recounted an experience with an infant's death while ashore in Banda Aceh, Indonesia:

> I am not a pediatric nurse, and there are reasons I am not. I get too emotionally attached. Its just too hard for me. And having babies die is very painful for me. And the hardest one was...on land...the hospital...we walked in and there was this infant in an isolette struggling for life...And the foreign [non-host nation] nurses weren't doing anything...you could not do anything because it would be an international incident...And the [foreign nurses'] answer was, 'The baby's going to die anyway.' They let the baby die...It was very painful to me...I just stood there in just utter disbelief that this was happening right in front of me and I could not do anything.

This nurse also described what the staff shared regarding the critically-ill children:

> We used to bring very critical babies on...It was hard on the staff...I said, 'These deaths are hard on the staff because...we're not prepared to deal with dying babies...death from septic post-op baby who had gotten surgery on land, another had birth defects...That was hard and knowing in the United States some of these babies would've lived. It's something you wrestle with...I still wrestle with.

When asked how to cope with the pediatric deaths, this Navy nurse described critical incident debriefs for staff and self; other participants identified the cooperative services of psychiatrists, social workers, and chaplains aboard the MERCY during the OUA deployment as helpful. This participant specifically employed the following coping mechanisms:

> A lot of stuff I blank out. Its really bad, I just, like, bury it and...You just press on...I think for a while you suffer when you come back. A little bit of what they call care giver

exhaustion...compassion fatigue...I still think I still have some of that...between [previous duty station experiences] and some things that have gone on in my personal life...I still see [child's name]...the baby that died. I see a lot of the kids, but the weirdest thing is when I came back [to the United States] and went surfing, I saw bodies in the water for a bit. I had a little trouble surfing...and then I got over it. [I] scheduled critical incident debrief, just talked it out with myself, getting counseling...I didn't think I needed it, but I guess I did...because I'm a nurse, and I can handle anything...What I [also] did is I also sent emails home and my husband sent them out to people- of stories- and people would write me back saying, 'I cried when I read that story' of some of the miracles we were doing.

Participants recognized that they were most unprepared to care for pediatric patients, however, pediatric patients were also part of their most meaningful experiences during the mission. A Navy nurse described one incident:

There was a little girl that had a tumor in her, right in her nose, and her eyes were wide and she couldn't see very well and she was there with her mom and she was just so endearing. She would teach us, she had a coloring book and she taught us how to say the animals in her language and she would laugh every time we tried to pronounce them- it was pretty complicated- and she taught us how to count. So she was teaching us things about herself she'd been living with this since she was a baby, she had...I don't remember exactly what she had, but she was just so happy and, you know, I don't know if I had this big growth on my face that I would have been as cheerful and going about my life like she was. She actually came back to the United States and had it fixed.

Another Navy nurse described a particularly meaningful experience:

I think taking care of any of the kids...any of the kids was meaningful. There was a cute little baby who left the ship who was having a lot seizures and stuff this kid initially went to the floor and then off the ship, but just getting to take care of him and hold him. He was a sweetheart...[I would go] back to visit him on the floor...He was adorable. Cutie pie...[Seizures came from], I think they had some sort of, the tsunami lung would get in their blood and make abscesses in their brain and I think that's finally what they decided and he got, he was intubated for a while for tsunami lung and then he got courses of antibiotics. When I went and visited him on the floor didn't look like he was normal. He didn't even look like he was there, his eyes looking at you but, at least he was alive. He was cute.

Ethical dilemmas. A notable lack of preparedness for ethical conflicts revolving around denial and limits placed on the delivery of healthcare services was also identified. Participants experienced anguish and often verbalized their reactions when it was necessary to say "No" and when they were not able to stay long enough to provide certain procedures and humanitarian nursing. These reactions did not preclude the participants from completing the deployment's mission. The participants coped through rationalization or internalization. More than one year after the deployment, it became apparent in the interviews that some participants were still dealing with distressing conflicts and related reactions.

During the study interview, one participant said:

There's big cancers that we're [USNS MERCY staff] debulking that are not going to be having any chemo or radiation or follow-up because we have nobody to tell them to follow-up with...they don't have the money to follow-up it. The big thyroid cancers we're taking out...these people are now thrown into being a sub-thyroid, hypothyroid

critical status- is that better?...You know we didn't take away their cancer. All we did was...debulk it so they looked better.

Because this nurse was also part of the USNS MERCY senior leadership hierarchy, the participant's experiences echoed those shared by the Chief Nurse aboard the MERCY during OUA. The Chief Nurse identified some of the ethical dilemmas faced by the MERCY senior leadership. The dilemmas included quandaries such as:

- Do we stabilize patients on medications that are not readily available in their home nation- medication for hypertension or diabetes?
- Do we perform total thyrodectomies for cancer when no synthroid is available? Or do we do nothing?
- Do we perform surgical techniques that will not be able to be modified or treated after we are gone because the patient's home nation does not have the supplies, such as correct non metric tools to remove orthopedic pins or plates?
- How can we provide comprehensive discharge plans? What level of care is available in the host nation- rehabilitation, ambulatory assist devices, amputee services and resources? (Comlish, 2005).

Most participants were mid-level managers, and they described conflicting feelings about the mission in regards to the healthcare services. They experienced distress over not being able to services they were capable of delivering. Specifically, they were conflicted by the deployment being too short and limited in scope; disheartened at having to say 'No' to providing care; and overwhelmed at how much there was left to do.

Regarding the mission's length and limited scope of care, one participant noted:

You're only there for a short period of time; some of these procedures that we had to do on different patients were stages of procedures, and then if you were only going to be there for a couple of weeks, you can't do all of the procedures- like skin grafting...or cleft palate, cleft lip...so that was the problem, was deciding who to do the surgery on, who not to do the surgery on.

Another Navy nurse described personal feelings:

Because you're only there for six weeks at a time, so you do things that can fix quickly and get back into their [host nation's] infrastructure and be able to care for themselves. [We] couldn't take traumatic brain injuries 'cause...they have no rehab. You can't take anything that...you can't take a long term vent-trach patient because you can't send the vent with them. So [we did] a lot of surgical cases...de-bulking tumors, de-breeding tumors.

Still another participant shared:

They had such extensive injuries, especially in Nias. We were sending them home probably maybe before they would have necessarily been discharged here, but we had a deadline, they country only gave us so long to be there. So it was kind of hard, it would have been nice to see a follow up or something to see how they were, because you couldn't really measure injury wise.

As such, some participants had a difficult time dealing with the length and scope of the care they were consigned to providing. Most dealt with conflicting feelings by rationalizing, saying that at least they made a difference to a few. One commented:

The length of time we were there...it was just too short...we just had a chance to do quick little things...I always felt like we were kind of just there to put a band aid on things and then we were leaving...There wasn't really anything set up, in place once we left, so that was kind of difficult to swallow. I felt like we were just kind of leaving them once we left....I think just because if we hadn't been there at all it would have been even worse and so I guess even though we couldn't do very much I think what we did was better than us not being there at all. I think we helped a lot of people that, we had people

that were walking around on broken legs for years that weren't related to the earthquake [in Nias], they had just been living with it, it was amazing.

Another nurse shared similar experiences:

It was harder in the places where you're only there...for a short...because you, you wish you could've stayed longer and done more. It felt like just a drop in the bucket...those were harder for me...I wasn't quite involved in those missions as I was in the others. Maybe that's my own way of kind of dealing with it...I disconnected myself a little bit more.

A common theme of discomfort was in not being prepared to say "No" to requests for services. One nurse said: "[It was] the most difficult thing was...just having to say, 'No'...it was probably the hardest thing, walking away- the hardest."

Still another participant explained:

It was a difficult decision for the ship in general, because we had to decide, because we couldn't care for everybody, we had to decide who would come on the ship, and you know its kind of heartbreaking for some of the people who are out there to decide this person gets care over that. So triage was a big thing out there. And there were so many people there that needed care that never got care but we only took care of what we could. We had the facilities in the OR to take care of whatever they brought us, from a fracture to a craniotomy to whatever. It's just that there was no nursing [in the host nation infrastructure] that could provide the care after for them. So when they decided they were going to do a procedures on somebody, they had to look at what the procedure was and see if we had care [on the ship and afterwards], if we had someone who could take care of them after we had done the procedure.

Deciding who received care was a tough task for those assigned ashore to triage. One nurse said:

> We all wanted to do...everything we could for these people who were in very, very, very poor circumstances...[we, the triage team ashore] decided very early that we could not go anywhere without the other one, because it was too hard to say 'No.' You know, they would pull us into a tent and there'd be 300 people sitting there and they'd say, 'Tell us which ones that you can take today.'

Another nurse admitted it was hard to decide who to care for:

> It was heartbreaking to a lot of people [to make that decision] , it was emotional...so we were constantly trying to divide staff between staying on the ship working, staying off the ship working...That was a big problem for some of the people because they couldn't do everything for everybody [patients].

A participant described a personal conflict that was experienced and how to personally cope with the ethical dilemmas of triaging- deciding who received healthcare services and who did not:

> I don't think anybody deals with it. You still close your eyes and you see the faces of those people you couldn't help...all you could say is, 'I'm sorry...we would like to help...but we don't have the services to help you.' Because a lot of them were very terminal cancer people that we just really weren't going to help- chronic disease states that had gone so far. We tried to help the kids, because we were going to impact their lives...It was very hard....I still actually email [my colleague] every now and then and just say, 'It's a hard day, I can remember this one. Do you remember this one?' And he'd always email back or send a picture and say, 'Remember this one we did help?'...We

would have to come back because...I could never say to them, 'I'm sorry. I can't help you...I would take a picture and I would...present it to the surgeons and say, 'I know we can't do anything, but I have to at least talk to you about this case.' And so, we would go back with hundreds of pictures a night...we didn't want to promise them anything. We would say, 'We will do whatever we can to help.' Because sometimes, if we knew that they were in pain, we would try to give them some pain medications. If there was a diabetic with a bad infection and we could help for a little bit...we can bring them supplies to let the existing nurses or existing infrastructure help...[sometimes] we'd say, 'I can't help you with your grandmother but I see that your child is blind. Can we get him in to take care of his cataracts?' I couldn't help all eight of the family but sometimes I would say, 'How about your child? Can we talk about the little one first? I think, I think I can help here...You felt like you were God. You were picking the ones who you were going to save and the ones who were going to die.

One participant admitted to internalizing conflict and to having a difficult time even after more than a year away from the deployment:

It's hard...I still some days, I get really sad...and I'm closing my eyes to sleep at night and I see the kids. I see the people...[in] the tent...you just remember the tent, with all these people in it. 'Please, please, please, pick me. Pick my family member.'...Well, at least I did something for some of them...We actually didn't have time to even process what we were feeling until we left Banda Aceh...

Another nurse had a comparable experience. Although not haunted by the faces of people this nurse could not help, conversely, this nurse had fond recollections of the faces of people she

had helped. When asked what memories were evoked when one sees faces, this nurse smiled and tearfully shared:

> I see the good things...I think I see- its almost like a- such a deep gratitude for what we did, but you feel like you don't deserve it. You know, its like, 'Oh, my gosh! I was doing my job!' But they were so grateful! They were so grateful.

Most participants were overwhelmed by the care they could not provide. They often left ports feeling they could have done more. Describing their efforts as a "drop in the bucket" and a mere "band aid," one participant poignantly expressed sentiments as: "It does overwhelm you. It's like walking into a stadium – the best way – a football stadium with 100,000 people. How many people – you a nurse – how many people can you touch?" The participants coped with this by rationalizing that they did make a difference. A participant described this rationalizing as the following:

> We also made a difference by educating some of these nurses, by teaching some of the families. And it wasn't always about medical care. It was about, 'We are Americans, and we are a humble people, and we're good people'...We used [the Starfish] poem at the end to explain to people, and it's a very emotional thing, because you can't save them all, but you can save this one.

Participants said they talked with "psychiatrists on the ship...[we] would have sessions and talk about that...[we] would talk amongst ourselves, not to get so disheartened because we can only do what we can do."

Most participants coped with the frustrating circumstances by changing their paradigms. One said you "look at the whole picture and you say, 'Well, I'm here, and we're helping those that we're able to help with the capabilities that we [had].'" Another coped by using cognitive

messages, such as, "Stay in your lane and only control the things you can control...You better either live with it or have an ulcer"; as with other participants, he coped through exercise, socialization, and communication with family,

Overall, the most common coping mechanism experienced by the participants during the mission was expressed as follows:

> You do whatever you can, whatever the country wants you to do. It was different though in that it was just so long and you knew you could stay there forever and there'd always be more patients coming. So it was kind of hard to leave the area, once you got the process going, patients coming on, giving good patient care and then you go off and more patients come and go and come and go. You hate to leave because you know there's more patients who you could help. But you have to follow orders, and you can't stay there forever, you have to draw the line somewhere...I just try to think of all of the good that we did do instead of all that we didn't do. I try and focus on the positives and how we helped the people we helped.

As a humanitarian nurse and Navy nurse, one participant shared a story of taking care of the staff:

> We'd sit down and talked about it. Not how much we did, you did, and its not whether or not that you helped everybody, but the fact that you helped as many as you can...[you've] done a great job here and this is a once in a lifetime situation, you can never have another experience like this. You should be proud of yourself."

Clinical supplies and innovation. During the humanitarian nursing portion of the mission, participants also recognized that there was a lack of clinical supplies. They adapted to the deficit by being innovative and creative. For example, one nurses noted they "had to use supplies for

things other than what they were intended for." Several participants discussed how they employed innovation and conservation of clinical supplies. One Navy nurse experienced, "You have to learn to improvise out there...you learn to create things, you learn to create different kinds of dressings...splints...be creative as far as [processing] trash." Another Navy nurse expressed it this way:

> For the most part it was the typical care that we would provide here but it was a lot more of trying to be inventive, put things together in a different way because the supplies that we had weren't what we were used to. A lot of them were older supplies that, like the wound vac. They put a wound vac on everybody because it helped the healing a lot quicker and we only had so much to heal, but it wasn't, it was big gomcos. And so it was, we had to get a lot more creative with how we took care of them and did different care.

Still another participant adapted the MERCY supplies to accommodate the mission's patients as follows:

> Supplies were an issue. So I had to develop different plans...screws and bolts in one set weren't the same so you had to make sure you had the right set if you ran low on certain, certain types. Found out there that Indonesians are shorter and skinnier than us. So...your outliers you have fewer because for us there's less people like that...out outliers were the ones that were used more frequently so I had to make sure to take them out of the sets, combine sets to make sure...We did our own improvised wound vacs out here using surgical scrub sponges and suction tubing and IO bands.

A participant recognized the limitations of the supply system and discussed ways of coping that ensured mission accomplishment and readiness. MERCY physicians and nurses had to work closely together and make patient care decisions collaboratively:

> Over there in Indonesia, we were so far off the beaten path for all the ships and planes that were moving supplies around the world that there was very limited resources to get us supplies and we needed to get supplies right away but it could take several weeks to get supplies...We were always conserving supplies and then using supplies for things other than what they were intended. We used blood tubing for the Y blood tubing for the cysto tubing because we couldn't get any cysto tubing in...[Physicians and nurses needed to confer with one another] 'OK, this is what we have, as you look at your patient keep this in mind, this is what your resources are.

One of the participants recounted the following as one of the most meaningful experiences during the mission; this experience features the need to be innovative with supplies and how the MERCY team got the job done:

> We had one gentleman, his shoulder got separated. He was trying to brace the ceiling, because his daughters were below and he was trying to protect and the ceiling comes down and it separates his shoulder. The family was OK...we had found him towards the end of Nias...we would have liked to have done the surgery but we were limited on time. We were going to be pulling out of there in two days, so we didn't want to do the surgery and send them back with this fresh wound or surgical procedure. So what we did was, it was amazing. The ortho techs created some sort of traction devise with the orthopedic surgeons...then a bunch of us manually applied traction to this guy's arm while the surgeon manually manipulated the shoulder back into place. So we saved this guy a

surgery.

When queried, the participants described times when they were least prepared. They identified resources they wish they'd had, and unanimously, they mentioned better supplies and more pediatric nursing experience. Participants coped with the lack of supplies through innovation and adapted to the lack of pediatric nursing experts by adjusting staffing schedules and spreading pediatric nursing experts across shifts.

Humanitarian Nursing as Naval Officers

During the humanitarian nursing phase of the OUA mission, the participants spoke of their experiences as Naval Officers - in leading others, taking care of enlisted personnel, taking care of administrative details on their nursing units (including schedule making and training staff), providing supplemental bedside care during busy times, and taking on Navy-specific collateral duties. These Navy duties varied and included: acting as officer in charge of infectious waste disposal; being team leader in chemical, biological, and radiological decontamination; performing as equal opportunity manager; performing Naval Liaison Officer duties; and collecting nursing lessons learned. One participant commented that her role as a Naval Officer while providing humanitarian nursing was:

> No different than me being a Naval Officer at the hospital. I'm a Naval Officer all the time anyway. You are officer first and your job is second...mentoring, the leadership thing, keeping the enlisted informed of everything, making sure the enlisted [were] OK.

Several participants spoke of their role as Naval Officer in the caring of those entrusted to their leadership. Naval Officers helped their staff adapt to and cope with the mission. Participants particularly advocated and counseled junior enlisted personnel; they perceived their Naval Officer role as including such tasks as: advocating for enlisted personnel in getting time

off to be with families during deployment preparation; obtaining resources (email and telephone access) to communicate with family; referring staff to chaplain, social work, or psychological support services as needed; and training staff to provide clinical care. All participants cited their roles as Naval Officers and Navy nurses to train hospital corpsmen. The participants valued training corpsmen and perceive it as their professional obligation and dictate. The relationships between Navy nurses and hospital corpsmen during this deployment as experienced by participants are presented later in this chapter.

Humanitarian Nursing as Ambassadors of the U.S.

Several participants in leadership positions were keenly aware that before the tsunami, 70% of Indonesians had a negative opinion of the United States government and its people. They knew Indonesia was the largest Muslim nation in the world and realized that tensions post 911 against the United States were tenuous, at best; nevertheless, participants denied feeling unsafe, vulnerable, or in immediate danger during this mission. Shipboard security teams provided briefs, which helped keep safety in the back of everyone's mind at all times. Some participants perceived the deployment as a humanitarian gesture part of the Global War on Terrorism. They recognized their roles as ambassadors and prepared for the experiences by providing professional quality humanitarian nursing care and adhering to the military code of conduct. After their tsunami relief efforts, participants happily touted that 70% of Indonesians surveyed had a positive opinion of the United States.

Some participants acknowledged their role as ambassador, sharing the following sentiments:

> You also are given this opportunity to positively impact a part of the world that doesn't ever get our attention as a country, I think that adds a lot of value, too...We were saying

that an ounce of prevention is worth a pound of cure. But an ounce of humanity is worth a pound of war.

One participant had learned the art of diplomacy from a Navy lawyer and described how helpful that lesson in diplomacy was:

> How to talk to different people. How not to make any promises. How to work with many different levels of people. Yeah. It was the foundation that I don't think I could be able to ever play that role if I didn't have what he'd instilled with me, because I went with him as a wife to many different functions...One of the very first things that had happened – we [Americans] came storming in and, of course, we didn't know what was really going onshore [in Indonesia]. We were – we were at the receiving end of the Embassy telling us what was going on...that first day we bring in 70 people...and we overstormed staffs of people who had been there for 28 days. [Another international group] had shut down their ER because they were moving into – their ER was a tent, like one of our fleet hospital-type tents. And they were moving into a fixed building of – that they had rehabbed and, you know, mopped out all the muck and parts and stuff inside there. They had done a lot of work...They were in another compound...watching the Navy come in, you know, like gangbusters, landing on their landing zone...[they] weren't even speaking to us...And I heard through somehow...that their washing machine for their patients' laundry went down...I volunteered. I walked over and said, 'Would it be possible for the Mercy to do the laundry for you?' And that's how we got accepted...it was a win-win.

Another participant shared initial thoughts that there was a lot of resentment towards Americans in the Muslim nation of Indonesia. In this nurse's experience, the MERCY deployment made a difference:

> I think that for the patients we actually took care of and brought onboard the ship, that we were able to actually make a difference in that way. I think they saw the United States in a better light, and they saw the American people as opposed to just hearing things through their...communication systems they have in place over there.

Not all of the OUA participants aboard the USNS MERCY were prepared to be ambassadors of the United States. One study participant observed that there were some who did not like the idea and were not prepared to represent the United States:

> That's something that I had to come to terms with, that I'm a political pawn. I mean, really, that's what it is. And if you're not okay with that, then you...might have to realize its much bigger...We weren't out there to give [just] health care. We were out there to project an image of the United States that we're out there to help you, not hurt you, you know, and you have to be OK with that big Navy and government. If we can help people that's great, but you better accomplish our primary mission which is to promote good will and promote a positive face- a caring face in the United States...I think you got to look at the big picture, and I think sometimes for nurses and doctors, that's hard.

Those unprepared for the political strategy of ambassadorship instead held to the rationale that they were making a difference in the lives of their patients as humanitarian nurses. Participants coped by rationalizing that they did their best to help others and show Americans are kind. One participant related:

> We also made a difference by educating some of these [host nation] nurses, by teaching

some of the families. And it wasn't always about medical care. It was about, 'We are Americans, and we are a humble people, and we're good people.

Similarly, as Navy nurses, many participants were not prepared for the ethical dilemmas that came with denial of care and limitations placed on care services. Most managed to deal with this through rationalization. Participants coped with the role of ambassador by keeping focused on the good things they did as humanitarian nurses, in general. Some participants proudly experienced their roles as constructive contributors to the Global War on Terrorism. Overall, the participants perceived their roles as humanitarian nurses- making a difference, one patient, one family, and one nurse at a time. In the process of trying to portray Americans in a good light and change lives, the participants' lives were also changed by the mission - "changed for the better."

Humanitarian Nursing and Relationships

Per the Grounded Theory, the participants in this study experienced the humanitarian nursing phase of the mission through relationships. While engaging in humanitarian nursing, they experienced communication and collaboration with patients and their families, translators, NGO nurses, and Navy hospital corpsmen. The participants used their skills, knowledge, mindsets, and coping mechanisms and experienced a rewarding mission of humanitarian nursing.

Relationships with patients and families. Participants identified early on that during this mission, patient care was synonymous with family care. In Banda Aceh hospitals, nurses went home at night, and patients' families provided care for hospitalized loved ones. Family-centered care was the norm, and it is culturally expected that family members spend the night and deliver care to their hospitalized loved ones. Throughout the mission, these family-centered customary practices were honored and facilitated by the MERCY staff as much possible. A Navy nurse described how family members were part of patient care operations:

> When you brought a patient on [the ship], you would have to bring their family member on too, so you may have brought two or three other family members just to get this one patient because they look, they call it the 'Great White Hope' and they didn't want to give their family away and not know that they never returned. So for that reason, you had to bring some family with them...so you not only had to care for the patient, you also cared for the family members too....had to provide places for the family to sleep as well as the patient. So when you had one patient, you may have three or four family members with them, even though we would tell them to bring one family member, they may bring their whole family because they had no where to go.

Family members did participate in the care of their loved ones hospitalized aboard the MERCY. Since every patient had a family member escort, the family member was housed on the open-bay medical-surgical wards with the patient. According to one participant, family members often "ended up being patients...it [the ward] was kind of a care center too, just for the family members you had them as well so you were taking care of them also so it was pretty difficult." While providing such family-centered care was not without its challenges, Navy nurses accepted this cultural practice. Inpatient nurses even coined the phrase 'Village Care' when describing the humanitarian nursing care delivered on the medical-surgical wards aboard the MERCY:

> They [the patients] kind of helped each other, because it wasn't like a ward at the hospital where everyone's in their own little room. It was one big open area...so it was actually nicknamed 'The Village' because that was essentially what it was. There were older people, and babies and younger people, so they kind of, we would go around and do patient care. We couldn't find our patient because they were all sitting around someone

else's bed. Even if they were from different villages, they were kind of helping each other in that way.

The ward nurses used 'Village Care' as an opportunity to provide health and community education to family groups. The participants also provided anticipatory guidance and education to families. From 'Village Care,' the nurses learned that medications intended for one patient may be dispensed in the patient's village for all village members:

> One of the things we learned when we were teaching about medications, you know, 'this is your medication'... 'this is for blood pressure'...when they got to the village they would disperse it through out the village for everybody to take.

Participants adapted to this practice by re-iterating medication guidelines and adapting the dosage and amount of medications dispensed:

> Their nursing care is...the family takes care of the patient. So we're trying to teach family members how to do dressing changes, make sure the dressing changes get done. And they don't like to hurt their family so burn dressing changes are painful. And you don't know if the meds...are going to get sold on the street. This is a cultural [practice] you cannot change.

However, when providing care, participants took these cultural matters, along with other issues, into consideration. One participant described cultural experiences with patients and their families saying:

> One of the other things we had to do was cultural as far as food. They had to get the right food that they [the patients and thief families] ate, some of them didn't eat pork, some of them didn't eat this, some didn't eat that; we had to allow certain time for them to pray. So, it was quite interesting, quite different.

Another participant noted that, "We did get cultural lessons coming out, like, we were told not to point...not to look directly in the eye, not to stare, and...not to use our hands so much...and speak more softly..." Other participants identified several of these noteworthy concerns- dietary preferences (sugar & spices); spiritual beliefs and religious practices (Muslim, prayer, religious elders or males as decision makers); toileting differences (no use of toilet paper, females standing on toilet seats and squatting during urination); and gender roles (same gender standbys; males as predominate decision-makers even for wife's surgery). A Navy nurse recounted an experience with providing patient care:

> Men make the decisions...we're mot like that in the United States, everybody's responsible for their own health care...the woman has uterine cancer...and the men make the decision whether or not to take it out...or they'll want to go back to their village and talk to the senior in their village...Sometimes [it was] a logistics issue...you have to give an opportunity for them to go back and speak to their village elders or their community elders.

Another participant described the traditional family structure where "the men are the breadwinner and if they don't go out and make money...manual labor...their family is going to starve if you can't fix it...they don't have government assistance...the family's survival."

The participants described how meaningful their experiences were, particularly when relating with the patients and their families. Most measured success by the patients' smiles and healing. A participant proudly claimed, "Just seeing I made a difference, I feel successful." Participants also described how they were thanked by the patients and their families. The patients would thank the Navy nurses through smiles, small gifts, and reverent bows at the waist with

arms crossed over chests. Many participants were humbled by the gratefulness. They described communicating with patients and their families, reflecting many of the participants' experiences:

> These people were so appreciative of all the care they got. They didn't mind waiting, they didn't complain. It was a different approach than what we see here [in America] because here someone has to wait ten minutes, they're upset and mad. There, they would wait for hours. They would come and stand in line two days...to be seen to see if they could even come on the ship to receive care. Because some of them had no way of receiving care at all...we saw extremities that had been fractured for years...just things we [Americans] take for granted...a tumor that's been growing for 15 years...bladder stones out of kidneys that were they size of baseballs. They'd been growing for years, so they were so appreciative of all of the care that we gave them.

Relationships with translators. The participants described the mission through their experiences with translators. Most found it difficult to communicate with patients and their families through translators. Several participants commented that they had never taken care of patients they couldn't speak directly with:

> We had to have interpreters everywhere they [the patients] went. Even though they may speak a certain language but they had different dialects of it and sometimes an interpreter couldn't understand that dialect. So that was a big problem."

When asked how to cope with that situation, a participant responded that they would get another interpreter who could speak the dialect. There were several translators aboard the MERCY, and they were very busy throughout the ship. The participants had to rely on non-verbal communication skills:

We only had a lot of times one translator for our area and if they were consenting someone for surgery, or something, they were busy doing that and we would a lot of times have to decide or determine if a patient was in pain or what was going on despite charades or just by doing what we thought, if they looked like they were in pain, or similar, you know in your gut on what was going on a lot of time...sometimes we would kind of draw pictures, how to demonstrate stuff [during patient education].

Participants discussed their use of drawings and charades to ensure communication, particularly with preoperative education and verifying consent. The participants praised the efforts of the translators and commented frequently on how helpful they were. Often the translators explained cultural norms and offered guidance to the Navy nurses:

I'd get feedback from them like, 'You really need to pay more attention to the privacy issues...spend more time focusing on this...and the cleanliness issues are addressed this way...some things don't translate from one language to another clearly...verbal communication is fairly...simple to translate...nonverbal cues are a little bit more hard to pick up on...even the eye contact thing or not making eye contact...and the smiling."

Participants talked about how difficult it was to read the patients' nonverbal cues because patients smiled a lot and averted eye contact. Participants had to rely heavily on their nursing assessment and evaluation skills when verbal communication was lacking. They worked closely with translators to discern verbal and nonverbal messages from patients and their families.

One participant described how challenging it was to convey sympathy to the patients and their families. Beyond words, the participants used appropriate and culturally-responsive nonverbal cues, such as reassuring touches, eye contact, gestures, and facial expressions. Hugs

were occasionally exchanged, but participants said that permission was always sought and obtained beforehand.

> Trying to help them [patients] when they had such mental issues going on also because it wasn't that they were just injured but they had lost their home and most of their family so they were kind of, some of them were just kind of in their own little world, in their own little shell I think and it was hard to communicate with them, but it was hard to communicate, you know, our sympathy and our understanding when you couldn't communicate to them. That was pretty difficult.

Some participants said they didn't always know if the patients got the full intent of the messages sent to them. A Navy nurse noted, "I could talk for ten minutes and the translator would say two sentences." Another participant had similar comments, "That was difficult...one of our jokes, you know, you'd say like two things and the translator would say like 30 words....I guess that was our big joke all the time...lost in translation...you don't always know."

A participant recounted a story that uncovered a sticky situation, one where verbal communication and context clues did not add up. He experienced the importance of being persistent when it comes to communicating with patients through translators.

> They [patients and translators] are fearful to tell the truth sometimes...There was a kid...who was down the wards...having a hernia surgery...and can't have anything to eat after midnight. He was the first case of the day. They brought him but he had chocolate all over his face...The anesthesia provider and the nurse were there talking to the patient...through the translator...[when was the] last time had anything to eat, and that dad's going 'No' and the kids' shaking his head 'Yes.' Then the translator goes 'No' and

> we obviously saw it, and eventually got out of him that...they were passing out doughnuts on the wards...and kids are kids...they were fearful that, one, they would get in trouble or their surgery wouldn't be able to happen...we were able to do the surgery just later in the day...They had a lot of trust issues they had to overcome.

Most of the participants did not share stories of conflicting messages. Instead, they described how grateful the translators were, how hard they worked, and how integral they had become to the mission. The translators became invaluable, needed as conduits of communication and caring. Through the process, they too were touched. One identified translator in Banda Aceh was quoted:

> Here you not only healed bodies but you treated them with such gentleness, such compassion and such great courtesy. They are perhaps happier than they have ever been in their lives because for the first time they are aware of their worth as people- that their thoughts and feelings and lives count. They leave with self-esteem. This is something very special and very rare that you have given them (Comlish, 2005).

Relationships with NGO nurses. For the first time in history, Navy nurses and NGO nurses worked side by side aboard a USNS hospital ship to provide humanitarian nursing care. Overall, the participants described their relationships with the volunteer nurses from NGO Project Hope as relationships of mutual respect. Participants described a process to get to that level of the relationship. As is common in many team building situations, participants described the process of relating as "forming, storming, and norming" where "expectation management" and "learning from each other" were experienced along the way.

Like the participants, the Project Hope Nurses came aboard the MERCY at varying times to assist with the mission. The first group arrived in Singapore, just a week before the MERCY

arrived off the coast of Banda Aceh, Indonesia. Rotations of Project Hope nurses came and went through OUA I, TSCP I, and OUA II. The Project Hope nurses were volunteers from all over the country. Study participants experienced an overall respect for these nurses who had left their jobs and lives to voluntarily help survivors of the tsunami and earthquake natural disasters; they commented that the NGO nurses possessed a great admirable "volunteer spirit."

One Navy nurse who saw the first wave of NGO nurses arriving aboard the MERCY described the experience as:

> Now we have been thrown into a situation where they're working with total strangers...'storming, forming, norming'... Everybody had an expectation. Meeting all the nurses for the first time and I – the civilians have a big expectation, we had a big expectation, and we all had to figure out how to work through that...We also had people that actually wanted it to be a vacation...people brought cameras and expected to be tour guided through the tsunami...once the second group came out, we kind of laid the groundwork, 'This is how it is going to be...' You learned from the first group.

Another Navy nurse experienced friction when the NGO nurses first came aboard the MERCY. She attributed this feeling to the following:

> I think just the differences, they came, I think their expectations, that was the biggest thing, the expectations, I don't know what expectations they were given but I don't think it was exactly what they, when they came out they weren't met. A lot of them came out thinking they were going to go ashore everyday and do shore care, but it's like, 'We're a hospital ship. We bring the patients onto the ship.' So they were upset that they didn't get to go ashore a lot and then we had some people going, 'Well we have to work

everyday?'...Some friction there, and like I said, difference in the way they were treated, they weren't treated as officers, they weren't treated as enlisted, they were kind of this different group...I know things were put together very quickly on all sides, but I think if they had just gotten some sort [orientation] of you're not going to, I mean I'm sure they probably didn't know so I can't blame anybody, but that they probably didn't know what they were going to do once they got on the ship...But you're not going to go to shore everyday...you are a military vessel, there are rules and regulations, they have very strict [rules].

The participants described the need to explain the role of the Hospital Corpsman to the NGO nurses. A Navy nurse described, "Teaching them that corpsmen are not housekeepers...Corpsmen are LVNs on steroids...had to teach them [NGO nurses] what corpsmen responsibilities were." Several participants also described their experiences first working with NGO nurses, how they had to teach them about military basics:

It was a lot of teaching and leadership roles, because with the civilian nurses and then the corpsmen they weren't really sure how the other one functioned, especially with the civilian nurses as far as what the corpsmen did. So it was more teaching and leadership and trying to get everyone [to understand each others' roles].

The first day [we] have a little meeting and teach everyone how it worked, we kind of had to teach everyone as we were going...They would ask, 'How does a military nurse work? How does a corpsman work?' So we would just explain to them.

They weren't used to the military structure and kind of how the rank system worked, and kind of how we did business in the military. But after the first couple of days, I think we

kind of got through that process and we learned kind of what their skills sets were and how to use them...and they learned about our skill sets and we kind of work together as a team after that.

Another participant described orienting the new civilian nurses:

They didn't know the military too well, so what we would do is just take them under your wing and just kind of show them...'this is how the military does things'...explain the military language,...what terms mean...it [the ship] was our home and they came and they were our house guests.

The participants organized orientations for subsequent new rotations of Project Hope nurses. "When the second group came in, we had patients already, so the skill stations had to get real quick...you almost had 100% turnover...you had to lower your census, lower your surgery cases for that turnover period...[to train]." Orientation topics for the newly reporting personnel included: shipboard safety rules and regulations; work hours, physical demands, and assignments; uniform/dress codes; Navy rank structure and personnel roles; shipboard behavior norms; and unit-specific equipment skills stations. After the orientation was in place, the participants experienced the deployment as running smoother.

Since the NGO nurses also came from varied clinical backgrounds, there were some that were very specialized and had great depths of clinical knowledge. Several participants from the perioperative unit commented on the wealth of clinical experience from the NGO nurses. One Navy nurse described, "They worked side by side us all the time. These were experienced nurses...the only thing with them was getting them used to being on a ship and the ship behavior..."

Other participants working on the wards noted that the NGO nurses needed more training:

> A lot, I mean we had to teach the medical-surgical portion of care because a lot of the NGO nurses we had weren't med-surge nurses. We had a breast health nurses and we had like a dialysis nurse, and so we had nurses that hadn't done surgical, you know, post-op patients or medical patients in years and years.

Over time, things got better. The participants and NGO nurses worked collaboratively as a team. One experienced:

> It was a give and take experience...we all just kind of learned from each other because we were all from different areas. They would teach me, I would teach them, different care that none of them had never done. Surge or post-op I would teach them how to change a wound or something like that. We just all took care of each other and taught each other.

After learning about each others' expectations and each other, the participants and NGO nurses fostered a mutual reliance on each others' strengths. A participant shared:

> [We] had preconceived notions of each other...I think they thought we were going to be very militant and thought they were going to be all these hippies, kind of, 'want to go help the world' kind of people. We blended together really well.

Another participant described the sharing of clinical information and expertise,

> We [eventually] would pull off of each other's experience, because I hadn't done much ortho, so one of the other nurses happened to have some background and that's kind of what we did there. And when the internet was running we could pull things off the internet and [use their clinical policies and procedures].

Participants also described how NGO nurses shared the Navy nurses' roles of training corpsmen to provide humanitarian nursing care. Once NGO nurses learned that corpsmen were more than nurses' aids, they helped by teaching corpsmen.

> I think working with the NGOs was, I mean, from my experience, the ones that I worked with. It was a great experience. They were extremely helpful. They worked hard, they were willing to do whatever it was that needed to be done. They had a lot of skill to give, knowledge to pass on and working with the corpsmen, training the corpsmen. The corpsmen's hands weren't tied like they would be at a civilian hospital so they could teach them to do something and then the corpsmen could then do it. So unlike at a civilian place, the technicians can't do IVs, can't push meds, do things like that, do assessments and here the corpsmen could do all of these different things, and if you train them to do it, seen them do it safely, then know that they can independently work like that without you know, me following behind. Because a lot of time we had more patients than staff, we had to allow the corpsmen to do a lot of things and the NGOs were important training them, providing training for them.

Overall, the participants experienced collaboration while working with the nurses from Project Hope. A Navy nurse proudly recounted a sentiment echoed by the other participants throughout their stories of the mission: "As a matter of fact, this is the fist time that the military and civilian counterparts have worked side by side on a ship...we made history."

Relationships with Hospital Corpsmen. The participants described their experiences of humanitarian nursing during the mission. They experienced training Hospital Corpsmen. Repeatedly, the participants described their personal responsibilities and duties to teach corpsmen to provide nursing care. One participant described the training experience:

Then a lot of the corpsmen we had never worked on the wards...you had to teach them all the basics for them too...they were starting from scratch. So that was hard...Some of them came right from corps school and they went into the hospital for a couple of months and then went and others had just been stashed at the hospital for a couple of years in patient admin or whatever.

A participant also described the experience of training corpsmen. She copied a corpsman training program used at the main hospital. The participants described taking programs used at the main Navy hospital and adapting them to the MERCY. She described the need for clinical leveling for corpsmen:

The difficult thing with the corspmen was that most of them had no inpatient experience and we started at ground zero...they had been in clinics and were a little cocky, thought they knew more than they did, and then they realized they really had never taken care of patients other than taking vital signs before...A lot of on-the-job or...just-in-time kind of training...We have a leveling program here at [Balboa] and we ended up implementing that out there...so that if they're level 3, they can give meds. If they're level I, they're like a nurse's aid...It was painstaking to have corpsmen that were their classes [Petty Officer mid-grade rank] that didn't know what they were doing. And we've implemented that all the corpsmen now...go through our Corpsmen Internship program and at least get exposed to taking care of patients on the floor...they learn their basics.

In the ICU aboard the MERCY, several corpsmen had come from the main hospital's ICU. They were prepared to provide the specialized care. An ICU nurse said:

I couldn't have done it without having the corpsmen that I knew and trusted and they had great clinical skills themselves...I know elsewhere...there were some problems with

> getting corpsmen who had not touched a patient in a long time and didn't know how to use the vital sign machine much less manage ten patients and thief families who didn't speak their language.

Even in the operating room, most of the corpsmen had less than a year's experience. One prior enlisted participant with surgical technician experience described training the corpsmen: "Some of the first couple of cases I came and helped some of the stronger techs get comfortable with the system and then they could teach the other techs." Also working in the operating room, a Navy nurse described the experience working with corpsmen:

> It was wonderful. They were the backbone of the OR. Couldn't have run it without them. They were wonderful. They knew what to do. Everybody got along, no body complained, they knew, 'Hey, we're all in this together.' And they just made the best of it and it was wonderful.

The perioperative nurses who participated in the study did express similar experiences about the collegiality in the operating rooms. All experienced the following sentiments:

> The OR is kind of a strange place. It is unique in the hospital, the fact that everyone is used to working as a team and every surgery you always have the anesthesia, the surgeon, the tech, the OR nurse, and they need to work together to get the patient taken care of, so the OR, you know, is just a bigger form of that so we were all very close, worked well together.

Overall, the participants experienced great teamwork with the corpsmen. The preference was to have corpsmen staff already clinical trained and experienced. If some of the staff was not trained or experienced then the Navy nurses trained the corpsmen. One Navy nurse trained

corpsmen and while doing so would say, "You're going to do things you will never do at Balboa. This is the time. This is what operational's about."

Conclusion

Readiness emerged as the most salient category in this study. A theoretical model was developed to illustrate how readiness influenced the Navy nurses' experiences during Operation Unified Assistance aboard the USNS MERCY. The mission was instrumental in moving the Navy nurse participants through the processes of packing seabags, steaming west, and engaging in humanitarian nursing. The participants' mindsets, knowledge, skill sets, and coping mechanisms were influential in the mission experienced by the participants, particularly in the way they experienced the phases of the mission. These attributes contributed toward their readiness, which was significant in helping the people overcome challenges and difficulties they faced during the phases of the mission.

Throughout the phases of the mission, the participants experienced readiness in the roles they fulfilled and the relationships they encountered.

CHAPTER 5

Discussion

The purpose of the study was to explore Navy nurses' preparation, practice, and collaboration during Operation Unified Assistance aboard the USNS MERCY - a humanitarian assistance and disaster relief mission. Readiness was the most prominent core category in the Navy nurses' narratives regarding their experiences during the OUA mission aboard the USNS MERCY. Previous qualitative studies have described humanitarian relief workers' experiences during disaster relief and humanitarian aid missions. However, these prior studies examined a wide range of types of humanitarian relief workers, including nurses. This study supports the findings in the literature that relief workers reported both positive and negative aspects of humanitarian assistance and disaster relief. Like other relief workers, this study's Navy nurses experienced the following negative stressors on their humanitarian nursing mission: the role itself, cultural stressors, environmental stressors, and organizational stressors (Cox, 1997; Soliman et al., 1998; Griffiths et al. 2003; and Bjerneld et al., 2004). Positive aspects of humanitarian relief work also experienced by the study's participants in the OUA mission included the rewarding experiences of caring for patients and the development of strong relationships with patients and other humanitarian workers (Cox, 1997; Soliman et al., 1998; Griffiths et al., 2003; and Bjerneld et al., 2004). Like other relief workers' experiences published in the literature, the nurses in this study identified skills, knowledge, mindsets, and coping mechanisms used during humanitarian relief efforts. Specific coping mechanisms shared by

previously studied relief workers and this study's participants included: humor, nature, social support, counseling, and debriefing (Cox, 1997; Soliman et al., 1998; Griffiths et al., 2003; and Bjerneld et al., 2004). Themes that resonated in nurses' anecdotal reports from disaster relief and humanitarian assistance missions were echoed by this study's participants. Most notably, the Navy nurses of this study stressed the importance of clinical competence, collaboration, communication, compassion, innovation, flexibility, cultural awareness and respect, and preparatory and ongoing training.

This study adds to the disaster relief and humanitarian assistance literature in general and to nursing knowledge specifically and is new information on how Navy nurses performed missions aboard a hospital ship along the side of NGO nurses. The study expressly identified the way that Navy nurses practiced, trained, cared for patients, and (for the first time ever) worked together with NGOs in a humanitarian setting. The stories of these Navy nurses began with the process of packing seabags, steaming west, and engaging in humanitarian nursing. The manner in which Navy nurses prevailed over challenges to get the job done (readiness) is a testament to their skills, knowledge, mindset, and coping.

This new knowledge is significant to the global community of nurses because it has the potential to improve future worldwide relief efforts aboard USNS hospital ships and other platforms across many healthcare disciplines, thereby, helping understand - and hopefully improving - the health of some of the world's most vulnerable citizens living in disaster-prone communities. Based on the study's findings, several implications for education of nurses preparing for humanitarian missions, practice, research, and policy are identified.

Readiness

The study identified the skills nurses needed to fulfill the OUA humanitarian mission. By identifying necessary skills, the study answered the U.S. Navy Surgeon General's call to examine which operational knowledge, skills, abilities, and tools are required to fulfill the uniformed health mission (Arthur, 2005). The U.S. Navy Surgeon's goal is to "have the right people, with the right skills, in the right place, at the right time to fulfill our health care mission" (Arthur, 2005, p. 1). From the participants' stories, the right skills for the humanitarian mission aboard the USNS MERCY hospital ship were identified. The study's findings showed the overall significance of readiness. The importance of readiness and operational primacy is aligned with the U.S. Navy's and Department of Defense's wartime priorities while engaged in the Global War or Terrorism, Operation Iraqi Freedom, Operational Enduring Freedom, and other missions. The Navy's Surgeon General supports the Chief of Naval Operations' (CNO's) top five priorities for the U.S. Navy, two of which are current readiness and future readiness. The CNO implores Navy forces to optimize readiness, stating:

> I believe more than ever before that we will win the battles of force structure, battles of endstrength and battles of the Defense Budget. We will win those arguments and those battles in the marketplace. But it is our sworn promise, now, at this very moment, to ensure that we deploy forces that are credible and ready to go in harm's way (Mullen, 2007, p. 2).

Packing Seabags

Navy nurses are expected to be readily prepared for deployment with current and credible nursing skills. The stories of the Navy nurses deployed during OUA aboard the USNS MERCY began with the process of packing seabags. It became apparent through the participants' stories

that with an average of only two to three days' notice to prepare for deployment, Navy nurses were ready to deploy prior to notification of OUA. Literally and figuratively, these Navy nurses already had their seabags packed. Even though they described last minute efforts to get proper shipboard uniform items and turn over their hospital-based nurse administrator jobs, most participants acknowledged their readiness to deploy as part of being in the Navy. These Navy sailors, many of whom had prior enlisted Navy experience, understood and lived Navy Medicine's motto of "standing by ready to assist." Within the current wartime operational tempo, these Navy nurses were prepared prior to the call out to the MERCY's OUA. In the literally sense, seabags were packed with wills, powers of attorney, and other legal documents. Symbolically, their seabags were already packed with current clinical and leadership knowledge and skills; mindsets were geared for impending deployments; and deployment coping strategies (i.e., exercise, communication with support systems, journaling, reading) were already identified. One participant who had previous deployed during a humanitarian mission described the mindset needed for the OUA mission by saying:

> You never know what you're going to be doing and you never know how long you're going to be there, it's kind of , do it as it comes along...[You] have to be flexible with the humanitarian mission.

The mindset needed for this deployment was described by another Navy nurse during the seabag packing stage:

> Look, we're in the Navy. We're here to do a job...it's just part of being in the Navy...You're never home 'til you're home...you know you will never leave until you leave...that mentality you live with...you push on...you do what you got to do.

The U.S. Navy Nurse Corps' leading expert on Navy operational nursing also emphasizes readiness and the expectation that Navy nurses #1 job is to train Hospital Corpsmen (Nunley, 2007). The participants' experiences supported these exemplars. Specifically, the Navy's Nurse Corps Operational Specialty Leader demands that Navy nurses are prepared and operationally ready. Navy nurses must be personally ready (wills, bank accounts, power of attorney, seabag); professionally ready (current professional credentials, ready to train corpsmen, completed required training); medically ready (up-to-date immunizations, physicals, eyeglasses), and psychologically ready ('get your mind right,' family preparation, spiritual readiness) (Nunley, 2007). The study's findings mirrored these requirements for operational readiness as outlined by the Specialty Leader. Participants identified readiness as salient - and their mindsets, knowledge, skills sets, and coping mechanisms as supportive of readiness. They also identified the seabag items required for optimal readiness, recognizing the phase of packing seabags as critical in preparing for the mission deployment.

Engaging in Humanitarian Nursing

The majority of experiences participants shared took place as they engaged in humanitarian nursing. During this phase of the journey, they described roles they took on and relationships they participated in. They described the challenges they faced as Navy nurses, which included challenges in pediatric nursing, supplies, and limits placed on care. Relationships with patients and their families, translators, NGO nurses, and hospital corpsmen revealed commonly experienced themes. In their words, participants respectively described the relationships with patients and their families as "village care"; with translators the theme of "cultural communication" emerged; with NGO nurses themes of "forming, storming, norming"

evolved to "mutual respect"; and with hospital corpsmen it became apparent that Navy nurses' had a "duty to teach and train".

To date, few articles have focusing on the OUA mission from a nursing perspective have appeared in the literature. However, in October of 2006, an entire special supplemental issue of *Military Medicine* was published; the issue highlighted the U.S. military's medical team efforts and accomplishments during the tsunami disaster relief efforts. Of the 19 articles included in that publication, only one featured lessons learned and real-life experiences of a nurse's point of view (from the U.S. Public Health Service). Pryor (2006) described personal experiences during OUA I in the form of a case report, revealing a link between direct bedside nursing care and health diplomacy. The publication of an article during OUA from the perspective of a nurse is a welcomed novelty; however, this Navy nurse grounded theory research study makes contributions to the field of humanitarian relief research. It gives voice to nurses' practice and challenges.

Pryor's (2006) report echoed some of the study participants' experiences. Specifically, Pryor described how nursing care was delivered to a 10-year-old child found floating in the sea two days after the tsunami had hit Banda Aceh, Indonesia. Like the grounded theory research study participants' stories, Pryor identified cultural nursing care, such as incorporating family members in the care of patients and learning the patient's language to foster communication and convey respect. Like the participants in the current study, Pryor recalled being humbled by the overwhelming gratefulness that patients and their families demonstrated for the care they received. Pryor also recognized the impact of such compassionate and culturally sensitive care, touting the ripple effects of health diplomacy efforts in touching and winning the hearts of Indonesians.

Some of the Navy nurses discussed their roles as ambassadors of the U.S. In this role, they recognized that the tending they had provided was not just about delivering health care. Some participants proudly described OUA's efforts as a positive flag-waiving opportunity, citing a 70% turnaround in negative feelings about Americans amongst Indonesian people (the most populous Muslim nation in the world). More than a year after this deployment, the U.S. Navy Surgeon General also praised the OUA mission aboard the USNS MERCY as successful stating that "not only [did the tsunami relief efforts] provide much needed medical aid during critical times, but [it] also deliver[ed] a message of U.S. compassion, support, and commitment around the world" (Arthur, 2006, p. ii). The successful tsunami relief mission in 2005 has given way to the 2006 MERCY humanitarian deployment and the reevaluation of future hospital ship roles, manning, and missions (Arthur, 2006).

This study adds to Pryor's individual account a collective perspective of how some nurses had difficulty with health diplomacy tactics. From the participants' stories, many nurses had to cognitively reframe their thoughts about "being political pawns." Those who recalled unease with engaging in anything other than the altruistic provision of healthcare services coped by focusing on the care they delivered and the differences they made in the lives of the patients and their families. These reluctant ambassadors of the U.S. also coped by describing their efforts as not "providing fish for others to eat" but "teaching others how to fish" as they taught host nation and indigenous providers different ways to provide care.

Salience of This Study to Nursing Knowledge

No longer rendered silent, this study offers nurses' voices as new research has been focused on humanitarian relief from nursing perspectives. To date, it is one of the first published research study examining Navy nurses' experiences during OUA aboard the USNS MERCY.

While data from the study resonate with the general themes of research conducted with humanitarian relief workers of all disciplines, the study adds new knowledge and enhances the understanding of nurses' roles and relationships in humanitarian missions. The data go beyond what the current research has said about humanitarian relief trajectories, particularly in nursing education, practice, and research, along with Navy nursing policy.

Specifically, the study's data are congruent with the findings of Griffiths, Emrys, Lamb, Eagar, & Smith's (2003) research on humanitarian nurses' needs during Operation Safe Haven where nurses cared for victims of complex emergencies and civil strife- caring for East Timorese and Kosovar patients in a refugee camp in Sydney, Australia. The qualitative research done by Griffiths et al. was a rare study in that it focused solely on humanitarian relief efforts provided by nurses. The 87 nurses interviewed described the clinical skills required to care for displaced refugees. Thematic analysis of focus groups and individual interviews revealed that triage and emergency nursing skills were initially needed - and that community health and rural nurse practitioner skills were also important across the continuum of care. Resembling the study done by Griffiths et al. (2003), this Navy nurse study identified cultural competency and trauma-sensitive care as critical skills for the humanitarian relief mission. Both studies' data revealed congruent stressors and difficulties experienced by the nurses, such as: long hours; geographic isolation; cross-cultural stressors; and ethical dilemmas, where nurses experienced stress and moral distress. In Griffiths et al.'s (2003) study, nurses described how difficult it was to be the one person who was to decide if a child was well enough to go home and be repatriated to his or her home country; nurses cited distress over this ethical responsibility. Nurses also described issues they faced when they experienced compassion fatigue as a result of secondary traumatization, how difficult it was to care for patients who had been traumatized by rape,

violence, and other atrocities. They had difficulty emotionally and cognitively processing the trauma faced by their patients. Similarly, some of the Navy nurses identified their challenges with coping with watching babies die; having to saying "No" to care; limiting patient care; and being overwhelmed by the faces of people they could not help. While the nurses in the Australian refugee camp identified the need and opportunity for counseling services, the Navy nurses identified their primary coping mechanisms as: discussing cases with Navy colleagues, exercising, finding camaraderie, communicating with family members, and using other social mechanisms. In the Navy study, nurses reported that they would access services from psychiatrists, psychologists, social workers, and chaplains for their patients or their staff, but rarely for themselves. However, as previously shared by a few Navy nurses, some still experienced intrusive thoughts and verbalized difficulties more than one year after return from the OUA deployment.

Contrary to the study done by Griffiths et al. (2003), the Navy nurses provided humanitarian care within a different context. Disaster relief and humanitarian assistance nursing aboard a tertiary care hospital ship differed from the nursing care described in a refugee camp. The nursing skills and competencies needed during the disaster relief phases of OUA I and II consisted of well-rounded medical-surgical care for patients across the continuum of care - pediatric to gerontological nursing. During the humanitarian aid phases of TSCP I and II, community health, public health, ambulatory primary care, and educator skills were required.

Cox (1997) researched the experiences of 14 relief workers who responded to a bushfire in Sydney, Australia. Workers identified an insider/outsider phenomena and recommended that relief workers enter the community as outsiders and work with existing community groups to gain entry into the community to optimize relief efforts. Similar to Cox's research findings, the

Navy nurses described how they related to host nation nurses and providers. Participants' described how important it was to build rapport, use interpersonal skills, employ diplomacy, and cultivate trust when providing care at ashore facilities in host nation hospitals, clinics, and schools. Several participants described seemingly better teaching outcomes with host nation nurses and physicians when they took on the approach of humility, openness to learn from them, rapport building, and assessing their learning needs. Working with host nation providers and translators was crucial to traversing cultural barriers, gaining entry, and building trust.

Bjerneld, Lindmark, Diskett, and Garrett (2004) performed a secondary analysis of data from 20 health professionals who had worked with a Swedish NGO. The initial study was conducted by the Swedish National Board of Health which examined the training needs of healthcare humanitarian workers. The study's findings revealed, like the Navy nurse study, success in a humanitarian mission was influenced by professional competence, experience, and a priori skills in teaching and management. This study added more focused and current/prescriptive recommendations for training. The Navy nurses' stories highlighted more specifically what type of clinical bedside, educator, and leadership skills were required of this humanitarian mission. Specific leadership and management skills recommended include: diplomacy; cultural awareness and sensitivity; conflict mediation and resolution; advanced interpersonal communication skills; and team building skills.

This study on Navy nurses' experiences during OUA aboard the USNS MERCY offered more than the previous qualitative research studies conducted on military nurses' experiences during military operations other than war. Turner (1998) described the lived experiences of 11 U.S. Air Force Chief Nurses, and Majma (2000) examined 20 U.S. Air Force nurse anesthetists. Both researchers examined nurses' experiences across different deployments, missions, and

platforms. The current Navy nurse study examines collectively the experiences of nurses in the same deployment. The Navy nurses' stories have similarities with those of Air Force nurses in Turner's (1998) and Majma's (2000) research. In Turner's (1998) study, as in the current study, nurses identified the following skills needed for such missions as peacekeeping and like humanitarian operations: maternal child, mental health, medical-surgical, perioperative, trauma, community/public health, gerontological, and patient education. Training, including: immediate, predeployment training; readiness on lessons learned from other deployments; ongoing recurrent training; provision of military support training during deployment; and cultural competence were found critical to the mission. Majma's (2000) findings, as in the current Navy nurse findings, revealed that psychological well-being was facilitated with communication; success was related to pre-deployment training on machines specific to the platform; and flexibility was essential. The current Navy nurse study differs in that this study specifically described the disaster relief and humanitarian aid nursing clinical practice, preparation, training, and interagency collaboration aboard a specific hospital ship platform. The context of interagency humanitarian nursing while attached to a USNS hospital ship is the current platform, which the Navy will use in future humanitarian missions.

Implications

Based on study findings, several implications for Navy humanitarian nursing education, practice, research, and policy have been described, and results from this study build upon previous research in suggesting specific implications for innovations in these areas. A conclusion section follows the implications.

Navy Humanitarian Nursing Education

As Navy nurses continue to train for humanitarian missions aboard hospital ships, it is imperative that nursing lessons learned and nurses' experiences be shared. Such anticipatory guidance prior to deployment can help Navy nurses pack their seabags using the appropriate skills, knowledge, mindset, and coping techniques to optimize readiness during the humanitarian mission. Dissemination of the Navy nurses' experiences during OUA aboard the USNS MERCY, to include formal research and anecdotal reports, should be readily available in readily accessible forums such as the Navy Nurse Corps website, weekly publications of *Nurse Corps News*, portable DVDs, policy manuals, and more established forums such as formal educational courses. The current Military Medical Humanitarian Assistance Course can be easily adapted to include this study's findings specific to shipboard and ashore humanitarian care. Online access to such training, along with other international humanitarian relief courses such as SPHERE, CHART, and ICRC, can better prepare humanitarian nurses. Online access should be available for all levels of Navy and NGO personnel. Formal courses on shipboard orientation and protocols, ethical dilemmas, moral distress, well mental health tips, and pediatric nursing would benefit all prospective deployers. Offering such courses prior to deployment or while steaming west in transit to the mission location was recommended by the study's participants.

Another key educational implication is to prepare core nursing competencies for humanitarian missions aboard a hospital ship. Such competencies should include specific skills on: inpatient nursing (nursing generalist, specifically current medical-surgical nursing for all ages of patients; family-centered care; transcultural nursing; strong psychosocial assessment skills; and familiarity with pediatric nursing); ambulatory nursing (health educator skills; community and public health skills; ambulatory surgery skills; and primary care skills); and leadership skills (diplomacy; cultural awareness and sensitivity; ability to mediate and resolve

conflict; strong interpersonal skills; and team building). For sustainability of humanitarian skills in Navy nurses, clinical sustainment opportunities should be considered. Navy nurses must provide, at a minimum, 168 hours of bedside nursing care to ensure operational readiness for a combat war scenario. Currently, clinical proficiency in inpatient areas is recommended. Since the humanitarian mission is part of Navy nurses' future deployments (even in combat scenarios), Navy nurses should be able to conduct their clinical hours in community health or public health areas to keep their skills current. The Navy Nurse Corps should also support full-time duty under instruction scholarships for Navy nurses in the areas of disaster relief as it relates to public health, as well as formalize the role of Community Health nurses, as does the Army.

Nursing Practice

The study participants identified clinical procedures, clinical problems, the use of organizational standards and guidelines, problem-focused triggers, and knowledge-focused triggers. These are the first steps in using the Iowa Model of Evidence-Based Practice to Promote Quality Care (Titler, Kleiber, Raken, Budreau, Everett, Steelman, Buckwalter, Tripp-Reimer, and Goode, 2001). Participants identified some opportunities to improve the quality of care. Specifically, they described the need for more pediatric nursing expertise. They strongly agreed that they were least prepared for pediatric nursing, although they rated their experiences with pediatric patients as the most meaningful of the deployment. It is recommended that an advanced practice pediatric clinical nurse specialist be added to the nursing staff of future humanitarian missions; these nurses will be able to address staff development and clinical leader issues described by the study participants. Teaching nursing staff about pediatric intensive care and routine care during the steaming west phase of future journeys could contribute to improved clinical proficiency, competency, and overall clinical readiness. It is also recommended that an

advanced practice nurse clinical nurse specialist in mental health be added to the staff roster; this specialist could provide buddy care for nurses who use camaraderie as their primary coping mechanism when facing conflict or experiencing moral distress, as explicitly shared by study participants. Well-mental health buddy care is recommended to decrease the stigma of accessing mental health services while optimizing camaraderie. Advanced practice mental health nurses ideally can provide staff education and anticipatory guidance on moral distress signs, symptoms, and coping strategies for ethical dilemmas faced during humanitarian mission aboard a deployed hospital ship as identified by study participants. The mental health clinical nurse specialist can also provide care to the culturally keen mental health care to the patients, their families, and host nation providers. Special attention must be given to the culture concerns and values of the patients since signs of acute stress may manifest differently in non-American cultures.

Nursing Research

Results from this study suggest that benefits would be derived from the institution of an entire program of research regarding nurses' involvement in humanitarian assistance and disaster relief. An integrated approach in which both qualitative and quantitative methods are utilized could result in a fuller understanding and conceptual model development in this study area. Initially, an additional qualitative research study examining the experiences of the NGO nurses deployed during OUA and subsequent humanitarian missions aboard the USNS MERCY and USNS COMFORT could be undertaken. Given the increasing use of NGO personnel within the uniformed services, knowledge of how the NGO nurses experience the humanitarian deployments aboard the hospital ships could well contribute to planning strategies for team building and skill mix in future missions.

Examination of the concept of moral distress and its significance to this study area could provide another valuable basis for future qualitative studies. Moral distress, defined as "a feeling state experienced when a person makes moral judgments about a situation in which he or she is involved, but does not act on those judgments", is experienced by nurses who have been deployed during disaster relief and humanitarian assistance missions phases of a deployment (Fry, Harvey, Hurley, and Foley, 2002, p. 374). The need for further examination of moral distress is suggested by this study as well. Nurse participants specifically commented on the salience of moral distress when confronting situations in which little could be done to assist indigenous people lacking permanent health care resources. Future research could be informed by the model of moral distress in military nursing developed by Fry et al. (2002) from interviews with 13 Army Nurse Corps Officers who had deployed to military crises, such as war and humanitarian missions. Initially, qualitative studies describing the moral distress phenomenon in Navy nurses could be performed. Subsequent development of a reliable and valid measure of moral distress in military nurses would provide the basis for future model testing. The examination of the relationships among moral distress and such related concepts as resilience and suffering in Navy nurses providing disaster relief and humanitarian care aboard a hospital ship platform could provide a valuable basis for planning intervention studies.

Research to identify and compare stressors experienced by Navy nurses deployed to humanitarian missions with those experienced by Navy nurses deployed in support of Operation Iraqi Freedom is recommended. The qualitative study is a trajectory of the pilot study conducted by Boren and Axman (2006). They cited and used McEwan's (1998, as adapted by the Institute of Medicine, 2001) Stress Response and Development of Allostatic Load Conceptual Model as a framework to describe the stressors identified by deployers. Data were collected through semi-

structured interviews guided by an interview schedule based on McEwan's model. These deployers also described methods they used to cope in the deployed environment. Physicians, hospital corpsmen, and nurses were interviewed during the pilot study. Since it was difficult to reach saturation of categories for three different samples, a new study of deployed nurses will be conducted. Identification of stressors and coping mechanisms for humanitarian missions without disaster relief components will assist in efforts to prepare, support, and facilitate optimal readiness and performance in humanitarian missions.

Research on upstream solutions to mitigate the effects of natural disaster on an immediate basis by indigenous people is also needed. While this study focused on providing technologically advanced assistance following a significant time delay, the need for enhanced, immediate locally-generated solutions to challenges post disaster are of great future importance. Participatory research with indigenous peoples of disaster-vulnerable communities is recommended to identify culturally appropriate strategies. While it is acknowledged that such communities may lack the material and technological resources of developed countries, human resources such as community solidarity can be posited to be extremely valuable. If the intent is truly to teach others how to fish, then involving indigenous, host nation peoples in all aspects of humanitarian mission planning (from initial community response to anticipating the potentially harmful effects of outside aid) is imperative.

Ultimately, a program of research in this area will involve an integration of both qualitative and quantitative studies, addressing the intersection of the needs of registered nurses and indigenous peoples alike. The construction of a model of best practices for military nurses involved in humanitarian missions will be a complex task. The careful study of variables such as moral distress, resilience, suffering, readiness index, and the effects of deployments on nurses'

health status will provide a background for planning and testing interventions designed to prepare nurses more adequately for the experience. In addition, the development of adequate outcome indicators for "mission success", such as perception of care by indigenous people post-disaster, will be an essential component. It is hoped that this study has provided a small, but important basis on which to build a research trajectory resulting in Navy nurses' enhanced readiness and effectiveness.

Navy Nursing Policy

The possibilities for policy changes that stem from this study are significant. It is recommended that nurses be involved in all planning facets of humanitarian missions. Nurses can ask the tough questions, such as: What policies will best prepare clinicians to deliver competent care? How can missions facilitate positive patient outcomes as identified by indigenous peoples? How can we better market nurses' lessons learned during humanitarian missions? How can we share public health indicators with professional humanitarian aid organizations? How can we coordinate and communicate our humanitarian efforts in a value-added, timely way? It is recommended that Navy nursing policy recognizes the need to sustain clinical skills crucial to humanitarian nursing- recognizing and valuing the sustainment of ambulatory care nursing skills (such as immunizations, health education, family practice, and case management). Currently, only sustainment of critical care, medical-surgical, perioperative, and acute care nursing skills is recognized.

Conclusions

This study explored Navy nurses' experiences during Operation Unified Assistance aboard the USNS MERCY. Grounded theory was the method for this research. A theoretical framework was developed with readiness as the most salient concept in the nurses' stories.

Readiness emerged as the most salient category in this study. The mission was instrumental as context moving the Navy nurse participants through the processes of packing seabags, steaming west, and engaging in humanitarian nursing. The participants' mindsets, knowledge, skill sets, and coping mechanisms helped Navy nurses get to readiness. This readiness was significant in helping participants overcome challenges and difficulties they faced during the phases of the mission in the roles and the relationships they experienced. The implications for nursing education, practice, research, and policy are numerous. A gap in knowledge about Navy nurses' OUA experiences aboard the USNS MERCY is now filled. The study has given voice to how Navy nurses prepared, trained, practiced, and collaborated during a disaster relief and humanitarian assistance mission aboard a hospital ship. Meaningful, life-changing experiences - along with challenges faced and overcome - were vividly described by the participants in their own words. Unanimously, the participants touted the deployment as the highlight of their careers. One summed up the degree of reward and satisfaction received during deployment as: "An ounce of humanitarianism is worth a pound of war."

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Appendix A

NMCSD Expedited Review Approval Letter

DEPARTMENT OF THE NAVY
NAVAL MEDICAL CENTER
34800 BOB WILSON DRIVE
SAN DIEGO, CALIFORNIA 92134-6000

IN REPLY REFER TO:
6500
KCA
11 Jan 06

From: Commander, Naval Medical Center, San Diego
To: Department of the Navy, BUMED, Human Research Protection Program (CODE M53HR), 2300 E Street NW, Washington DC 20372-5300

Subj: **LOCAL APPROVAL OF EXPEDITED CIP STUDY #S-06-LHOOOOO-075,** "NAVY NURSES' EXPERIENCES DURING OPERATION UNIFIED ASSISTANCE ABOARD THE USNS MERCY: A GROUNDED THEORY"

Ref: (a) NSHSBETHINST 6000.41B

Encl: (1) CIP Study #S-06-075

1. Per reference (a), enclosure (1) with supporting documentation is forwarded for your review and information.

2. Local approval for this study was authorized by signature of the Institutional Review Board (IRB) Chair on **22 May 2006.** Approval will be documented in the May 24, 2006 IRB minutes.

3. Questions should be referred to the Research Program Administrator's Office at (619) 532-8136 or DSN 522-8136.

W. LOCKETTE
By direction

CLINICAL INVESTIGATION DEPARTMENT
Naval Medical Center San Diego
34800 Bob Wilson Drive, Suite 5
San Diego, CA 92134-1005
Tel: 619/532-8136 FAX: 619-532-8137
E-mail: [illegible]

6500
KCA
22 May 06

From: Head, Clinical Investigation Department (CID)
To: **CDR Angelica Almonte, NC, USN**, for Research Study **CIP #S-06-075** titled "Navy Nurses' Experiences During Operation Unified Assistance Aboard the USNS Mercy: A Grounded Theory"

Subj: **OFFICIAL APPROVAL OF EXPEDITED/MINIMAL RISK CLINICAL INVESTIGATION PROGRAM (CIP) STUDY**

Ref: (a) NAVMEDCEN SDIEGOINST 6500.9

Encl: (1) **Approved version of CIP Study**
(2) **IRB Research Project Information Sheet**
(3) **Travel Information**
(4) **Revisions to the protocol**

1. Your research protocol (enclosure (1)) has been approved for initiation as of this date. Your protocol has met the requirements of references (a) and (b) and has been approved by the Institutional Review Board (IRB). A continuing review will be required in **April 2007**.

First Continuing Review Date: April 2007
IRB Approval Expiration Date: 17 May 2007

2. Enclosure (2) is the approved Research Project Information Sheet with the IRB stamp of approval. You may not make changes to this document without prior review and approval by the IRB. Each subject must receive a copy of the Information Sheet.

3. Requests for travel funds for presentations related to your protocol must be processed through Medical Editing and include your CIP #. Travel funds are allocated by Naval Medical Education and Training Command (NMETC), Bethesda, MD and are available on a first come first served basis.

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W. LOCKETTE
By direction

Appendix C

NMCSD Modification Approval Letter

Coady, Tammy A CIV

From: Almontebell@aol.com
Sent: Friday, July 07, 2006 9:18 AM
To: tacoady@nmcsd.med.navy.mil
Cc: Almontebell@aol.com
Subject: Request for Modifications: CIP #S-06-075

Dear IRB Chair & Ms. Coady,
Very respectfully request to make the following modifications to CIP #S-06-075 titled "Navy Nurses' Experiences During Operation Unified Assistance Aboard the USNS Mercy: A Grounded Theory." Due to deployments and to increase participant enrollment, very respectfully request to modify the following items:

a. Extend recruitment/advertisement of the study from 3 weeks (indicated in the study protocol, pg. 18, para 2, item c) to "the email advertisement will be periodically sent until completion of the study to optimize participant enrollment."

b. Expand the interview procedures from face-to-face interviews (indicated in the study protocol pg. 24, para 4 & consent pg. 2, para 5) to telephone interviews and written interviews. For the telephone interviews, the data collection procedures (indicated in the study protocol pgs 19-20) will remain the same. Written interviews will be conducted via mailed semi-structured interview guides.

If you any questions regarding this modification request, please contact me at (619) 435-4878. Thank you ahead of time for your kind consideration.

Very Respectfully,
CDR Angelica Almonte

7/7/2006

Appendix D

USD Modification Approval Letter

Coady, Tammy A CIV

From: Almontebell@aol.com
Sent: Friday, July 07, 2006 9:18 AM
To: tacoady@nmcsd.med.navy.mil
Cc: Almontebell@aol.com
Subject: Request for Modifications: CIP #S-06-075

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a. Extend recruitment/advertisement of the study from 3 weeks (indicated in the study protocol, pg. 18, para 2, item c) to "the email advertisement will be periodically sent until completion of the study to optimize participant enrollment."

b. Expand the interview procedures from face-to-face interviews (indicated in the study protocol pg. 24, para 4 & consent pg. 2, para 5) to telephone interviews and written interviews. For the telephone interviews, the data collection procedures (indicated in the study protocol pgs 19-20) will remain the same. Written interviews will be conducted via mailed semi-structured interview guides.

If you any questions regarding this modification request, please contact me at (619) 435-4878. Thank you ahead of time for your kind consideration.

Very Respectfully,
CDR Angelica Almonte

7/7/2006

Appendix E

NMCSD Approved First Party Consent Form

CLINICAL INVESTIGATION DEPARTMENT
Naval Medical Center San Diego
34800 Bob Wilson Drive, Suite 5
San Diego, CA 92134-1005
Tel: 619/532-8136 FAX: 619-532-8137
E-mail: [illegible]

From: Vice-Chairman, Institutional Review Board
To: **CDR Angelica Almonte, Nursing Services Department**

Encl: (1) Consent Form for CIP #S-06-075

1. The informed consent document for CIP #S-06-075, "**Navy Nurses' Experiences During Operation Unified Assistance Aboard the USNS Mercy: A Grounded Theory**" dated May 21, 2006, is approved.

2. Approval is only for the consent form. Initiation and enrollment of patients must be deferred until formal approval by the Head, Clinical Investigation Department is forwarded to you.

3. From this date forward, use only the enclosed approved consent form with the stamped IRB approval seal, which is initialed and dated by the Chairman.

D. A. TANEN
Commander, Medical Corps
United States Navy
Chairman, Institutional
Review Board

NAVAL MEDICAL CENTER
SAN DIEGO, CALIFORNIA 92134-5000

CONSENT BY A *SUBJECT* FOR VOLUNTARY PARTICIPATION IN A CLINICAL INVESTIGATION (RESEARCH) STUDY

1. You, _____, have been asked to voluntarily participate in a research project entitled, **"Navy Nurses' Experiences During Operation Unified Assistance Aboard the USNS Mercy: A Grounded Theory"** being conducted at the Naval Medical Center, San Diego by a nursing researcher who is a doctoral student from the University of San Diego and attached to the Directorate of Nursing Services at Naval Medical Center San Diego.

2. WHY IS THE STUDY BEING DONE?

The purpose of this research study is to: explain the experiences of Navy nurses and how they prepared, clinically performed, and (for the first time ever) worked with nurses from a non-government organization aboard the USNS Mercy during Operation Unified Assistance. Findings from this research study will help nurses plan nursing care in future humanitarian assistance and disaster relief missions by identifying: required clinical nursing training, knowledge, skills, and competencies; clinical nursing practice and outcomes; and interagency collaboration among nurses.

3. HOW LONG WILL YOU BE PARTICIPATING IN THE STUDY?

If you decide to participate in the study, you will be asked to complete a demographic form which may take up to 20 minutes to complete. At this time, you will also be asked to participate in an interview that may last up to 120 minutes in length. Following the interview, you will be mailed a copy of the interview transcripts and asked to verify if the transcripts depict your experiences during Operation Unified Assistance aboard the USNS Mercy. This part of the study may take up to an additional 40 minutes of your time. In all, your participation in the study may take up to 3 hours. At any time, you may decide to stop participating in the study.

4. WHAT IS INVOLVED IN THE STUDY?

If you take part in this study, the researcher will set up and confirm a time to meet. You will choose the date, time, and private location of the meeting. During this meeting, the investigator will answer any questions you may have regarding the study. You will then be asked to sign this consent form and be given a copy of the consent form. You will also be asked to complete a demographic form and answer questions during an interview. You will be offered a copy of the interview questions

Subject's Initials: _____

IRB Approval Stamp/Seal Required
(Do not make any alterations to this document w/out prior approval)

questions to use during the interview if interested. During the interview, you will be asked questions about your experiences during Operation Unified Assistance aboard the USNS Mercy. The interview will be tape-recorded so that it can be and analyzed. A summary transcript of your interview will be sent to you so you can read it and verify it to be your experience during Operation Unified Assistance aboard the USNS Mercy. At this time, you will be asked to contact the researcher within one week to verify if the transcripts need to be changed or updated. If the researcher has not heard from you ten days after the transcripts are sent, the researcher will contact you to verify the transcripts' accuracy. Once all the study transcripts verified by each participant, the researcher will analyze the transcripts and publish them in a report. Once the report is published, the researcher will contact you to give you the cassette tape from your individual interview. The cassette tape is yours to do keep or dispose of as you see fit.

5. WHAT IS THE EXPERIMENTAL PART OF THE STUDY?

The experimental part of the study is the completion of the demographic survey and conduct of the face-to-face interview.

6. HOW MANY PEOPLE WILL TAKE PART IN THE STUDY?

A total of 20 subjects are expected to participate in this study, but the specific number will depend on the criteria of "saturation" of categories in the research. This means that the interviews will be conducted until the same themes are seen again and again when analyzing the interviews, and therefore, "saturation" is reached. Participants will be enrolled into the study and interviewed until a theory emerges from the interviews and there is sufficient support for the theory.

7. WHAT ARE THE RISKS OF THE STUDY?

The risks or discomforts which are possibly related to your participation in this study are as follows: (1) The amount of time to complete the demographic form, interview, and review the interview transcripts may be a minimal disadvantage for participation in the study. (2) There may be minimal risks or minimal discomforts such as physical discomfort or emotional discomfort (awkwardness, sadness, anxiety) possibly related to participation in the study's interview. Should you become physically fatigued or emotional during the interview, the interview will be stopped and you will be given an opportunity to rest. After the resting period, you will be asked how to proceed with the interview, options include: continue with the interview; end the interview and reschedule another interview; schedule a longer rest period and continue the interview thereafter; end the interview and not reschedule another interview. **Should you require additional emotional support, you may consult with LCDR Rene Belmares**, an Advanced Practice Nurse Practitioner in Psychiatry/Mental Health at the Naval Medical Center San Diego. He can be reached at (619) 532-6559.

Subject's Initials: _____

IRB Approval Stamp/Seal Required
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8. ARE THERE BENEFITS TO TAKING PART IN THE STUDY?

The potential benefits for Navy nurses participating in this research study include: (1) An opportunity to openly discuss your experiences (positive or negative) during Operation Unified Assistance aboard the USNS Mercy; (2) A sense of satisfaction in that sharing your experiences, nurses and other health care professionals will become more aware and/or knowledgeable in regard to the nursing preparation, training, clinical practice, and collaboration during humanitarian assistance and disaster relief missions aboard a hospital ship; (3) A feeling of empowerment when new strategies/programs are developed based on your experiences; (4) Increased individual readiness with implementations of new strategies/programs; and (5) Tangible copies (transcripts of your individual interview and cassette tape of your actual individual interview for your disposal or keepsake) of your oral experiences during Operational Unified Assistance.

9. WHAT OTHER OPTIONS ARE THERE?

This research study is not designed to treat any medical condition that you may have. Therefore, there are not alternative procedure(s) or course of treatment that would be advantageous to you.

10. WILL I BE PAID TO PARTICIPATE?

You will not be financially compensated for your participation in this study.

11. WHAT IF I AM INJURED AS A RESULT OF PARTICIPATION IN THIS STUDY?

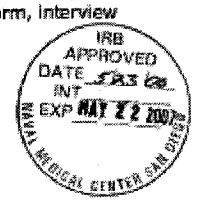
If you suffer any injury directly related to your participation in this research study, immediate medical attention is available at the Naval Medical Center, San Diego, or at another closer medical treatment facility, if applicable. Any injury resulting from your participation in this study will be evaluated and treated in keeping with the benefits or care to which you are entitled under applicable Navy, other Department of Defense, and other state or Federal regulations.

12. WHAT ABOUT CONFIDENTIALITY?

Your interview will be audio-recorded, written, analyzed, and studied in a manner that protects your identity. A transcriptionist (a person who types your words while listening to the audio recordings of your interview) will sign a pledge of confidentiality before transcribing your interview. Your name will be coded to protect your privacy. The code will be kept in a locked file cabinet and a password protected computer file. The only person who has access to this information is the researcher. This code will be used on all paperwork and forms. Your consent form will be kept in a locked cabinet only accessible by the researcher. Your demographic form, interview

Subject's Initials: _____

IRB Approval Stamp/Seal Required
(Do not make any alterations to this documents w/out prior approval)



form, interview tape, and interview transcript will be kept in a separate locked cabinet only accessible to the researcher. All other paperwork used during data analysis will be kept in this locked cabinet or in a separate password protected computer files- all only accessible by the researcher. In all publications and presentations resulting from this research study, information about you or your participation in this project will be kept in the strictest confidence and will not be released in any form identifiable to you personally. Any information provided and/or identifying records will remain confidential and safeguarded and retained permanently in a locked fireproof safe/file only accessible to the researcher. The results of the research project may be made public and information quoted in professional journals or meetings, but your real name will never be used. However, authorized personnel from the Navy Medical Department and from the Food and Drug Administration (FDA), where applicable, may have access to your research file in order to verify that your rights have been adequately protected.

13. WHOM DO I CALL IF I HAVE QUESTIONS OR PROBLEMS?

If you have any questions regarding this research study, you may contact **CDR Angelica Almonte, NC, USN at (619) 435-4878.**

If you have any questions about your rights as an individual while participating in a research study at the Naval Medical Center, San Diego, you may contact **CDR David Tanen, MC, USN, Chairman, Institutional Review Board at (619) 532-8125, or Dr. Warren Lockette, Head, Clinical Investigation Department at (619) 532-8127.**

If you believe that you have been injured as a result of your participation in this research study, you may contact **LCDR William Boland, JAGC, USN, Naval Medical Center, San Diego, Legal Department, at (619) 532-6475.**

14. WHAT ARE MY RIGHTS AS A PARTICIPANT?

Your participation in this project is entirely voluntary and your decision not to participate will involve no penalty or loss of benefits to which you are entitled under applicable regulations. If you choose to participate, you are free to ask questions or to withdraw from the study at any time. If you should decide to withdraw from the research project, you will notify **CDR Angelica Almonte, NC, USN at (619) 435-4878** to ensure your timely removal from the study. Your withdrawal will involve no prejudice to your future health care or any loss of rights or benefits to which you are otherwise entitled. Any new significant finding developed during the course of this study, which might affect your willingness to continue participation will be communicated to you.

15. CAN I BE TERMINATED FROM THE STUDY?

The investigator may terminate your participation in this study for the following reasons: if you are unable to complete the interviews necessary for the study.

Subject's Initials: _____

IRB Approval Stamp/Seal Required

(Do not make any alterations to this documents w/out prior approval)

16. SIGNATURE

You are making a decision whether or not to participate in the research project above. Your signature indicates that you have had this information presented to you, have had the opportunity to ask questions about the research and your participation, and agree to participate in the study. Further, your signature indicates that you have been provided with a copy of this consent document, a Health Information Portability and Accountability Act (HIPAA) Patient Authorization form and a document entitled, "California Experimental Subject's Bill of Rights."

SIGNATURES AND **DATE** SIGNED:		**PRINTED** OR **TYPED IDENTIFICATION:**
Patient / Subject	(Date)	Name / Status / Sponsor's SSN
Investigator/Researcher *(Person obtaining consent)*	(Date)	Name / Grade or Rank

Subject's Initials: _____

IRB Approval Stamp/Seal Required
(Do not make any alterations to this document w/out prior approval)

PATIENT AUTHORIZATION TO USE AND/OR DISCLOSE PROTECTED HEALTH INFORMATION FOR RESEARCH (HIPAA)
(In Keeping with the Health Insurance Portability and Accountability Protection Act)

What is Confidentiality of records all about?

The Naval Medical Center San Diego makes every effort to maintain the confidentiality of protected health information we obtain about you. However, we cannot absolutely guarantee confidentiality because other people may need to see your information in the course of this research study. Most people and organizations will protect the privacy of your information, but may not be required to do so by the law. Also, if the results of this research study are presented at meetings or are published, your name will not be used.

What is HIPAA all about?

The Health Insurance Portability and Accountability Act (HIPAA) requires that we get your permission to use protected health information about you that is either created by or used in connection with this research study. This permission is called an Authorization. The information we use includes your entire research record and supporting information from your medical records, results of laboratory test, X-rays, MRIs, CT scans and observations made by a physician or nurse which are both clinical and research in nature.

What will we do with this information?

Your protected health information will be collected and used during the course of the research study, to monitor your health status, to measure the effects of drugs or devices or procedures, to determine research results, and to possibly develop new tests, procedures, and commercial products.

Your research doctor will use this information to report the results of research to sponsors and federal agencies, like the Food and Drug Administration (FDA). The information may also be reviewed when the research study is audited for compliance. When the study is over, you have the right to see the information and copy it for your records.

Who will we share your information with?

Your information may be shared with any of the following:

- The sponsor of the study, or its agents, such as data repositories
- Other medical centers, institutions, or research investigators outside of the Naval Medical Center San Diego, participating in this research study
- State and Federal agencies which have authority over the research, the Naval Medical Center San Diego or patients. Good examples are: the Department of Health and Human Services (DHHS), the Food and Drug Administration (FDA), the National Institute of Health (NIH), the Office of Human Research Protections (OHRP), and the Department of Social Services (DSS) or other.
- This hospital or clinic.
- Accrediting agencies, such as JCAHO.
- A data safety monitoring board, if applicable
- Clinical staff who may not be involved directly in the research study, but who may become involved in your care, if it is possibly related to treatment

For this research study, the study investigator may share this authorization form and records which identify you to comply with regulatory requirements or for purposes related to this research to:

All documented Principal, Associate, and Sub-investigators, and the Medical Monitor (if one is assigned).

What if you want to revoke or cancel away your Authorization?

If you decide to participate in this research study, your Authorization for this study will not expire unless you revoke or cancel it in writing to the research doctor. If you revoke your Authorization, you will also be removed from the study, but standard medical care and any other benefit to which you are entitled will not be affected in any way.

Revoking your Authorization only affects the use and disclosure (sharing) of information after your written request has been received. Federal law requires sending study information to the FDA for studies it regulates, like studies of drugs and devices. In a case like this, your information may need to be reported to them and cannot be removed from the research records once it is collected.

Do you have to sign this form?

You have the right to refuse to sign this Authorization form and not be a part of this study. You can also tell your study doctor you want to withdraw from the study at any time without revoking the Authorization to use your health information. By signing this research Authorization form, you authorize the use and/or disclosure of your protected health information described above.

SIGNATURE AND **DATE** SIGNED:		**PRINTED** OR **TYPED IDENTIFICATION:**
Patient/Subject	(Date)	Name/Status/Sponsor's SSN
Researcher/Investigator	(Date)	Name/Grade or Rank

California Experimental Subject's Bill of Rights

(a) Be informed of the nature and purpose of the experiment.

(b) Be given an explanation of the procedures to be followed in the medical experiment, and any drug or device to be utilized.

(c) Be given a description of any attendant discomforts and risks reasonably to be expected from the experiment.

(d) Be given an explanation of any benefits to the subject reasonably to be expected from the experiment, if applicable.

(e) Be given a disclosure of any appropriate alternative procedures, drugs or devices that might be advantageous to the subject, and their relative risks and benefits.

(f) Be informed of the avenues of medical treatment, if any, available to the subject after the experiment if complications should arise.

(g) Be given an opportunity to ask any questions concerning the experiment or the procedures involved.

(h) Be instructed that consent to participate in the medical experiment may be withdrawn at any time and the subject may discontinue participation in the medical experiment without prejudice.

(i) Be given a copy of the signed and dated written consent form as provided for by Section 24173 or 24178.

(j) Be given the opportunity to decide to consent or not to consent to a medical experiment without the intervention of any element of force, fraud, deceit, duress, coercion, or undue influence on the subject's decision.

SIGNATURES AND DATE SIGNED:	**PRINTED OR TYPED IDENTIFICATION:**
_____	_____
Patient / Subject (Date) (If Applicable)	Name / Status / Sponsor's SSN
_____	_____
Parent / Guardian (Date) (If Applicable)	Name / Status

Version date: 1 Nov 04

Appendix F

Pledge of Confidentiality

Transcriber's Pledge of Confidentiality

I will be participating in the dissertation research project entitled:

Navy Nurses' Experiences in Operation Unified Assistance

Aboard the USNS Mercy: A Grounded Theory

I will be transcribing audio-recorded interviews into text. I will not know the names of the informants, but if I should recognize information that enables me to identify any of the participants I agree to maintain their confidentiality. By signing this agreement I pledge to keep all information strictly confidential. I will not discuss the information I transcribe with any person for any reason. I understand that to violate this agreement would constitute a serious and unethical infringement on the informant's right to privacy.

_____ _____

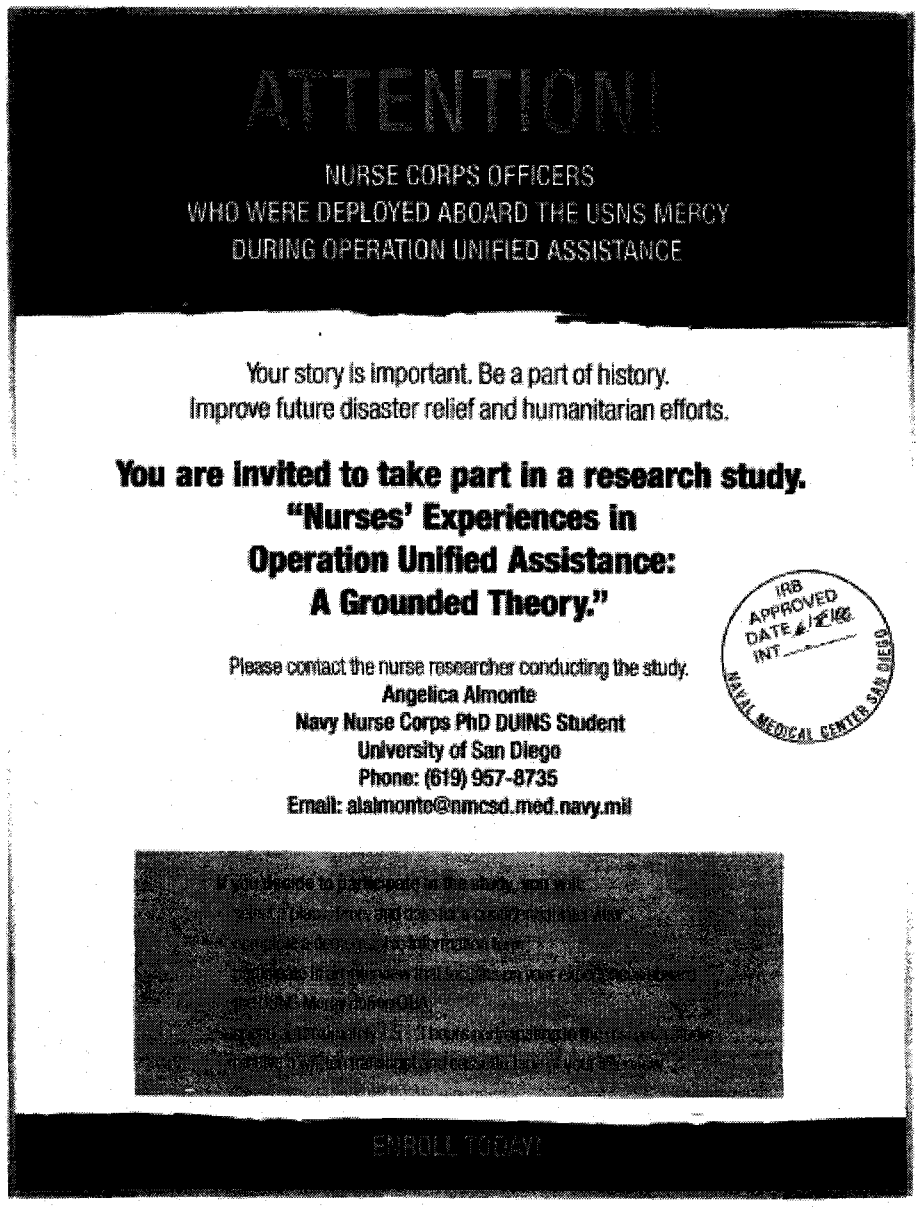
Signature of Transcriptionist Date

_____ _____

Signature of Principle Investigator Date

Appendix G

Advertisement Flyer



Appendix H

Demographic Form

Demographic Information Form

Participant ID #: _____

Interview Date: _____

Nurses' Experiences in Operation Unified Assistance: A Grounded Theory

- Mailing Address (interview transcript and interview audio tape will be mailed to you at this address):

_____

_____

- Dates of deployment aboard the USNS Mercy during OUA:

_____

- Age (current): _____ Age (during OUA): _____
- Rank (current): _____ Rank (during OUA): _____
- Years as a nurse (current):_____ Years as a nurse (during OUA): _____
- Years of military service (current): ___ Years of military service (OUA): ___
- Ethnicity (circle choice):
  - White or Caucasian
  - Black or African American
  - Hispanic or Latino
  - Asian or Pacific Islander
  - American Indian or Alaskan
  - Other: _____
- Highest Level of Formal Education: _____
- Clinical specialty role prior to OUA: _____
- Clinical specialty role during OUA: _____
- Job during OUA: _____
- Prior deployment experiences: _____

_____

- Identify any military training courses you have attended for disaster relief or humanitarian assistance (such as the Military Medical Humanitarian Assistance Course):
    - _____
    - _____
    - _____

If you know of any other Navy nurse who deployed during OUA aboard the USNS Mercy and may be interested in being interviewed, please ask them to contact me at (619) 435-4878.

Appendix I

Original Semi-structured Interview Guide

Semi-Structured Interview Guide

Participant ID #: _____
Interview Date: _____
Time: _____

Nurses' Experiences in Operation Unified Assistance: A Grounded Theory Interview Guide (revised on _____)

Purpose: To explore Navy nurses' experiences in Operation Unified Assistance aboard the USNS Mercy.

1. Consent Process:
a. Researcher introduces self.
b. Researcher explains purpose of interview.
c. Researcher offers consent form and allows time for participant to read form in the presence of the researcher.
d. Researcher will answer any questions the participant may have.
e. Researcher will ask the participant if they understand the study and if they consent to participating in the study.
f. Upon verbal consent from the participant, the researcher will ask the participant to sign 2 consent forms- one copy for the participant.
g. Researcher will give signed copy of the consent form to the participant.

2. Factuals/Demographics:
a. Researcher will give the demographic form to the participant to complete.

3. Prepare to Interview:
a. Perform 2 tape recording checks.
b. Take out memo notebook.
c. Ensure privacy.
d. Remind 1-2 hours for interview- get comfortable, etc.

4. Conduct the Interview:
a. See next page for semi-structured interview questions and probes.

A. Tell me how you found out you had to deploy aboard the USNS Mercy.

Probes:

- Tell about the process by which you prepared for Operation Unified Assistance aboard the USNS Mercy.

B. Tell me about your experience during Operation Unified Assistance aboard the USNS Mercy.

Probes:

- Tell me about the nature of your work role during Operation Unified Assistance aboard the USNS Mercy.
- Tell me what it was like for you to be a military nurse during Operation Unified Assistance aboard the USNS Mercy.

C. Tell me about the process by which you provided clinical nursing care.

Probes: (Training & Evidence based practice)

- Tell me how you provided nursing care on a daily basis.
- Tell me about the process by which you prepared to provide clinical care during Operation Unified Assistance aboard the USNS Mercy.
- Tell me what it was like to provide nursing care.
- Tell me what knowledge and skills were most helpful in providing nursing care.
- Tell me about experiences you were not prepared for.
- Tell me what particular resources you wish you had.
- Tell me about a difficult decision you had to make.
- Tell me about a particularly meaningful experience you had.
- How did you measure success in providing clinical care?

D. Tell me about the process by which you worked with nurses from Project Hope.

Probes:

- Tell me about what it was like working with the nurses from an NGO.

E. Tell me how OUA compared to other deployments you have experienced.

F. Tell me how your OUA experiences have influenced your decision about a career in the Navy.

G. Looking back, if you could change one thing about your experience during Operation Unified Assistance, what would you change?

H. Tell me about any issues encountered since your return from deployment.

I. Is there anything else you would like to add about your experiences that you have not already included?

During the analysis of interviews, new or additional questions/probes will be developed based on the data or emerging theory.

Appendix J

Revised Semi-Structured Interview Guide

Semi-Structured Interview Guide IB
Revised 7/20/06

Participant ID #: ____
Interview Date: _____
Time: _____

Nurses' Experiences in Operation Unified Assistance: A Grounded Theory Interview Guide (revised on 7/20/06)

Purpose: To explore Navy nurses' experiences in Operation Unified Assistance aboard the USNS Mercy.

1. Consent Process:
a. Researcher introduces self.
b. Researcher explains purpose of interview.
c. Researcher offers consent form and allows time for participant to read form in the presence of the researcher.
d. Researcher will answer any questions the participant may have.
e. Researcher will ask the participant if they understand the study and if they consent to participating in the study.
f. Upon verbal consent from the participant, the researcher will ask the participant to sign 2 consent forms- one copy for the participant.
g. Researcher will give signed copy of the consent form to the participant.

2. Factuals/Demographics:
a. Researcher will give the demographic form to the participant to complete.

3. Prepare to Interview:
a. Perform 2 tape recording checks.
b. Take out memo notebook.
c. Ensure privacy.
d. Remind 1-2 hours for interview- get comfortable, etc.

4. Conduct the Interview:
a. See next page for semi-structured interview questions and probes.

b. Formal Education & Degree: _____
c. Prior Service/Years & Experience: _____

A. Tell me how you found out you had to deploy aboard the USNS Mercy.

Probes:

- Tell about the process by which you prepared for Operation Unified Assistance aboard the USNS Mercy.

B. Tell me about your experience during Operation Unified Assistance aboard the USNS Mercy.

Probes:

- Tell me about the nature of your work role during Operation Unified Assistance aboard the USNS Mercy.
- Tell me what it was like for you to be a military nurse during Operation Unified Assistance aboard the USNS Mercy.

C. Tell me about the process by which you provided clinical nursing care.

Probes: (Training & Evidence based practice)

- Tell me how you provided nursing care on a daily basis.
- Tell me about the process by which you prepared to provide clinical care during Operation Unified Assistance aboard the USNS Mercy.
- Tell me what it was like to provide nursing care.
- Tell me what knowledge and skills were most helpful in providing nursing care.
- Tell me about experiences you were not prepared for.
- Tell me what particular resources you wish you had.
- Tell me about a difficult decision you had to make.
- Tell me about a particularly meaningful experience you had.
- How did you measure success in providing clinical care?
- How was it working with HMs & MDs?

D. Tell me about the process by which you worked with nurses from Project Hope.

Probes:

- Tell me about what it was like working with the nurses from an NGO.

E. Tell me how OUA compared to other deployments you have experienced.

F. Tell me how your OUA experiences have influenced your decision about a career in the Navy.

G. Looking back, if you could change one thing about your experience during Operation Unified assistance, what would you change?

H. Tell me about any issues encountered since your return from deployment.

I. Is there anything else you would like to add about your experiences that you have not already included?

J. What recommendations do you make for future disaster relief/humanitarian deployments?

K. What research studies do you recommend (clinical, policy, admin, training)?

During the analysis of interviews, new or additional questions/probes will be developed based on the data or emerging theory.