VIETNAM NURSE VETERANS AND MEDICS: A STUDY OF THEIR CURRENT HEALTH STATUS UTILIZING THE CORNELL MEDICAL INDEX, IMPACT OF EVENTS SCALE, AND THE SCL-90-R

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TABLE OF CONTENTS

TABLE OF CONTENTS (Continued)

PAGE

APPENDICES (continued)

LIST OF TABLES

LIST OF TABLES (Continued)

LIST OF FIGURES

CHAPTER 1

INTRODUCTION

Women were involved in the Vietnam conflict in Southeast Asia, yet little is known of those who served. Women numbered approximately 8,000 military personnel and 35,000 civilians. They served as USO service workers, Red Cross personnel, air traffic controllers, and intelligence gatherers. However, the majority of women in the military were war-zone nurses. The ramifications of the Vietnam war on the nurse veterans' readjustment have not been thoroughly studied. This research is a beginning step in lending further clarity and understanding to the experiences of healthcare providers in the Vietnam war and their current health status.

In the past several years, research studies have focused on the male veteran's readjustment processes. This research has revealed some negative consequences of the war for the male veteran. Egendorf's (1982) comprehensive and conclusive research on the readjustment of the Vietnam era veterans found that those who served in Vietnam have significantly more difficulties than their peers. The problems include greater use of alcohol and drugs, higher rates of arrest, a higher incidence of medical and

psychological disorders, lower educational achievements, and lower status jobs. Approximately 20%, or 800,000, male veterans experience symptoms of delayed stress or post-traumatic stress disorder.

In a study conducted in 1982 by Jenny Schnaier, the correlation of post-traumatic stress disorder symptomatology and the current life experience of female veterans began to emerge. She found, in her sample that approximately one-third of the PTSD symptoms were identified by 25% or more of the subjects as occurring between 10 to 30 times a month. By 1983, the plight of the Vietnam veteran nurses began to be publicized through the newspaper media, television dramatizations, and popular literature (CBS; NBC; Sweetman, 1981; Tarbell, 1981; van Devanter, 1983; Walker, 1983; Walsh, 1982). This was the beginning of some public awareness of the problem faced by nurses in the Vietnam war.

Scope of the Problem

Though nurses have been involved in aiding the wounded in wars since the Crimean War, as yet little but anecdotal information exists about their experiences. The kinds of stress and aftermath of the war experience are not scientifically documented. Striking similarities exist in the accounts of Florence Nightingale, who served as a nurse

during the Crimean War, Walt Whitman and the Civil War, and Lynda Van Devanter from the Vietnam War. What is contained in these accounts are hints of the stress of the war experience and its long-standing effects.

Prior to April 1984, only one dissertation and one thesis had been completed on the female veterans. The descriptive study done in 1982 by Jean Schnaier concluded that, for her sample, there was preliminary evidence that post-traumatic stress disorder may be applicable to the experiences of female Vietnam veterans. Women in her study continue to experience some residual mental health distress related to their war experience. Julia Stroud (1983) found in her study that women Vietnam veterans reported more difficulties than nonveteran peers in the area of psychopathology and interpersonal functioning. Further descriptive research is needed on the effects of the war experience upon nurses and their readjustment.

Significance of the Study

This study is designed to gather further information on the readjustment of the nurse veterans. The male perspective on wars has guided previous studies. Therefore, tools developed to study post-traumatic stress syndrome in war zones are male oriented. Federal funds have provided for extensive research on male combat

veterans of Vietnam. The same emphasis has not been forthcoming for female veterans, nurse veterans, or other health care personnel. This study will examine the readjustment of nurse veterans to their particular stresses.

CHAPTER 2

REVIEW OF THE LITERATURE

The review of the literature is divided into four sections, followed by the conceptual framework, definitions of terms, and research questions. The first section is a review of war's emotional impact on nurses. The second section reviews the postwar mental health adjustment of healthcare providers. It also includes a historical review of symptoms experienced by healthcare providers after wars. This is followed by the current diagnostic conceptualizations of posttraumatic stress disorder (PTSD). A comparison of male veteran and female veteran studies is included in this section. Studies of nurses in stressful civilian working conditions versus nursing in Vietnam is discussed in the third section. Similarities and differences of working in Vietnam and in civilian positions are compared. The fourth section reviews the work of Dr. Horowitz and his conceptualization of PTSD.

War's Emotional Impact on Nurses

Several universal themes become evident as one historically reviews the role of nursing in wartime.

First, the emotional impact of the work is evidenced by nurses' expressions of feeling overwhelmed, fearful, and shocked at the discrepancy between their expectations and the reality of war-zone nursing. Psychic numbing, the lack of feeling, and survival guilt are reported. Anger and distrust of authority for the "red-tapeism" is a second theme evident through wars. Thirdly, war zones necessitate innovative practices by the healthcare providers to repair the human body. Each war expanded the professions of nursing and medicine (Delvin, 1980; Kafer, 1981; Kalisch & Kalisch, 1978; Van Devanter, 1983).

Emotional Impact of the Work

Nurses' descriptive accounts of the wounded make it difficult to distinguish one war from another.

> World War I:
>
> A hypodermic of morphine was given the patient so that he would rest until morning, provided his condition or the nature of the wound did not need surgical attention in the operating theatre. I shall never forget my first convoy of soldiers. . . . A bullet in the abdomen, hardly any pulse and he had been vomiting. . . . No matter what we did, how hard we worked, it did not seem to be fast enough or hard enough. More came. It took me several days to steel my emotions against the pain . . . I remove blood and mud-soaked bandages and find an arm hanging by a tendon . . . Here is a boy . . . (Kalisch & Kalisch, 1978, pp. 315-316)
>
> World War II:
>
> One of my patients, only 24, has a piece of shrapnel in his heart, another, 29 and married, has both legs

> off--his hips are broken, his intestines exposed. Another, 19, was shot through the abdomen, and after the Germans found him lying, they kicked him and shot him in the head to finish him. (Kalisch & Kalisch, 1978)

Vietnam War:

> It was my first Mas-Cal, short for mass casualty situation . . . During the second night, we did three belly cases, a chest case, and a couple of multiple frag wounds. At one of the other operating tables, a tech had fallen asleep and fell into an open belly while the doctor was repairing a kidney. The tech was carried out of the OR and left to sleep on the floor of the office, but only for an hour. (Van Devanter, 1983, p. 100)

Nurses in the Seattle Veterans Group felt the anecdotal and popular literature and dramatizations of Vietnam experiences did not adequately reflect their wartime or post-war experiences:

> For the nurses, what is lacking, or perhaps what is not as powerfully expressed in existing works, is the sense of suffering, futility, purposelessness, and lack of meaning that they feel characterized their own experiences during and since the war. (Jacobs, 1983, p. 42)

Psychic numbing is an identified response to trauma. Figley (1983) identifies denial or numbing as the "universal" response. Nurses cried maybe once or twice, but then for survival repressed those emotions (Fay, 1983; Van Devanter, 1983; Walker, 1983). Schnaier (1983) reported that the women tried hard to remain detached, to be numb, and to not feel what was going on. But this was

impossible and instead each nurse remembered an atrocious incident that in her mind represented the whole experience for her (DiPaolo, 1983). It is argued that the nurses suffered more severe emotional mauling than soldiers who had respites in combat. The nurses saw waves of mutilated soldiers fresh from the field, who in previous wars would have died before reaching the hospital (MacPherson, 1984, p. 446).

The difference between nurses' expectations and the reality of war-zone nursing is another important factor influencing the the emotional impact. An Army nurse, Vicki Strye, joined the service to take advantage of the 2-year Army commitment for 1 year of school (Anderson, 1983). Rose Sandeki joined the Army and volunteered for Vietnam to help the wounded soldiers she had been seeing on the nightly news (Walker, 1983, p. 10). Shad Meshad, who has counseled over 200 ex-nurses, believes that the women went to Vietnam for the same reasons men did.

> They were attracted by the excitement: their career opportunities would be enhanced; and if they were nurses they would come out being the best-experienced nurses in their fields. They were women who were driven by idealism, energy, and naivete. (Sweetman, 1981, p. 7)

The nurses symbolized caregivers, protectors, mothers, sisters, girlfriends, and lovers. Sandeki recalls

that the 24-hour service the nurse provided left nothing for themselves. Nurses were there "to preserve the fighting force" (Sandeki, 1984, personal communication). In the field hospitals, the nurses were the protectors, the ones the wounded soldiers looked to for safety (DiPaolo, 1983, 12A). "As nurses, we were the caretakers. You had to be strong and if you didn't show that then something was wrong with your character" (Anderson, 1983). Nurses knew they were in Vietnam "to bring (soldiers') bodies back together as best as we could" (Schnaier, 1982). Meshad relates their frustration: "Above all the nurses, brought up to nurture and protect others, felt like failures because no matter what they did the GIs kept dying" (MacPherson, 1984, p. 449).

Survival Guilt

"Survivor's guilt" is a response noted in nurses who served in war zones. Gayle Smith's comments reflect one of the ways in which nurses experienced this:

> I remember when I got back (to the U.S.) not being able to listen to the radio . . . to the news . . . I'd be compelled to turn it off or walk out of the room and not listen to it because I knew there were things that might pertain to people in our compound being killed . . . and I felt I should be there still keeping them until the war was over. (Smith, 1981, p. 147)

Survival guilt is based on the harshness of realities, the actual death of others, and the struggle of the survivor to live. The experiences of the nurses in daily care for the wounded are comparable to the corpsman or medic. Despite the nurses', medics', and corpsmens' heroic life-saving acts, they are plagued with guilt feelings that what they did was not enough (Dewane, 1984, p. 1232). Rose Sandeki described the concerns of many nurses who felt they had not been able to do enough. In 1982, by Schnaier's account, 34.4% of the respondents felt they were not adequately trained for their positions in Vietnam. Williams (1980) found that those who suffered the most painful survival guilt are primarily those who served as corpsmen or medics (p. 15).

Frustration with Authority and Supplies

A frustration reported by caregivers throughout all wars is the lack of supplies or the ineffectiveness of the disbursement of the supplies. In the Crimean War, Florence Nightingale described the disorganization of the war department committees. The "red tapeism" delayed the transfer of supplies to areas where they were needed. Through her own resources, Florence Nightingale assumed personal responsibility for food supplies and utensils when she arrived in the Crimean. Medical equipment was scarce.

"Ms. Nightingale estimated that there were over 1,000 patients with diarrhea in the hospital and only two chamberpots" (Pickering, 1974, p. 109). She brought goods, supplied the store, and dispensed socks, shirts, knives, forks, towels, soap, bedpans, stump pillows, and tables.

In describing a typical night at Sternberg hospital in the Spanish American War, the lack of supplies is illustrated.

> Two hundred suffering patients, mostly all delirious, were brought to the hospital. Every one of them previously had been given a dose of Calomel and Jalop. There was not a bed "utensil" to be had and we, the nurses, suffered the consequences. The soiled clothing and bedding had to be taken care of and we had no way or equipment to handle it, so as to reduce to a minimum the danger of infection to us. We had no disinfectant whatsoever to use . . . There was not even one wash basin in these wards for the nurses to wash their hands. (Schuler & Kelly, 1898)

In Korea and Vietnam, the MASH units and MUST (medical unit self-contained transport) units were considered well-equipped by standards of previous wars. However, shortage of supplies included advanced technological items such as plasma, antibiotics, and blood.

Role Expansion and Innovations in Combat Nursing Practice

Each war expanded nursing technology and was both a time of stress and challenge for the nurse. Each war

posed a different role for the nurse and challenged the society in which the nurse lived. Florence Nightingale stepped out of the traditional women's role and advanced nursing as a profession during the Crimean War. She changed the image of nursing.

Ms. Nightingale organized the nurses, requisitioned the supplies, and instituted sanitary measures and nutritional standards (Pickering, 1974, p. 109). Through her suggestion, a sanitary commission arrived consisting of MDs, civil engineers, and sanitary inspectors. They discovered that the water was stored in tanks next to open privies, sewers were cesspools of filth, dead animals had not been removed, and the Turkish divans harbored rats. Through her efforts, the mortality rate of 14.5% in April dropped to 5.2% in May (Pickering, 1974, p. 114).

When the Civil War broke out in 1861 in the United States, there were no trained nurses. Government hospitals were staffed by religious nursing orders. Physicians preferred the religious orders because they were organized, were accustomed to discipline, and had helped in epidemics. However, the 600 sisters who volunteered for nursing the sick and wounded soldiers were not enough. A larger volunteer nursing Corps was needed to meet the nursing need. Concerned women petitioned President Lincoln to establish an agency to administer care to the sick and

wounded. The U.S. Sanitary Commission was created with its objective of securing healthful conditions in military camps and hospitals. The U.S. Sanitary Commission was advised and counseled by Florence Nightingale.

In the North, Dorothea Dix was appointed Superintendent of Women Nurses. She succeeded in having the army adopt a systematic plan of regulations for the nurses. Miss Dix required nurses to be 30 to 50 years of age, to have good health and endurance, to have a matronly demeanor and good character, and to be plainly dressed. Nurses bathed and dressed wounds, prepared and served food, and administered medications.

The South did not establish an official nursing organization. Instead, individual states and volunteers organized hospitals for their own troops near the battlefields. In the South, nursing care was furnished primarily by convalescent infantry men.

The majority of nurses in the Civil War were amateurs, yet "their humble efforts and the positive effects of their femininity made it legitimate for respectable women to enter the field of nursing" (Kalish & Kalish, 1978, p. 68). The collective nursing experiences of the Civil War were instrumental in the establishment of the first training schools for nurses (Flanagan, 1976, pp. 10-14; Kalish & Kalish, 1978; Skirbst, 1979; Whitman,

1968). A significant nursing change after the Civil War was the establishment of the American Red Cross by Clara Barton. This organization stemmed from her work with war relief operations.

All nurses utilized in the Spanish-American War of 1898 were nursing school trained. However, there was no organized army nurse corps at the onset of the war and no systematic method for organizing nurses for war service (Flanagan, 1978, p. 33). Female nurses in the Spanish-American War were called upon extensively only after typhoid fever killed 800 men in the first 3 months of the Cuban campaign. This resulted in the emergence of the nation's first large all-graduate nursing service.

During the Spanish-American War, the nurses were personally involved in the experiments to prove or disprove yellow fever as a contagious disease. The nurses were asked to put aside the sheets and pillowcases taken from the beds of their worst cases. These dirty sheets were put on beds in screened tents. Uninfected men who volunteered for the epidemiological study were assigned to sleep in these tents. When no new cases developed during a period of several weeks, it was proved that yellow fever was not contagious (Kalisch & Kalisch, 1978, p. 212).

A black nurse, Namahyoke Curtis, who had had yellow fever and was thus immune to it, was sent by the Surgeon

General of the Army to New Orleans, to cities in Alabama and Florida to obtain the services of blacks who were immune to yellow fever. Mrs. Curtis was able to enlist 32 immune black people (Stimson, 1926).

In the investigation of typhoid fever by Major Walter Reed and his commission, nurses were studied to establish the minimal period of incubation. The commission observed the noninfected nurses newly arrived to the hospital setting. When the first nurse came down with typhoid fever after 10 days, they concluded that the minimal period of incubation was 10 days.

On February 2, 1901, the Nurse Corps (female) was declared by law a component part of the Army. After the Spanish-American War, the Dodge Commission recommended a reserve corps of selected trained women nurses "ready to serve when necessity shall arise, but, under ordinary circumstances, owing no duty to the War Department, except to report residence at determined intervals" (War Investigating Commission, 1900).

The nurse in World War I was responsible for the development of new nursing skills to deal with modern artillery and exploding projectiles. These new weapons resulted in massive wounds that easily became grossly infected. Fragmentation shells burst into small, deadly splinters that caused extensive deep and ragged wounds

highly susceptible to infection. Shrapnel (jagged pieces of iron) cut across different organs of the body and produced multiple injuries at a single impact. The new steel-jacketed bullets on impact reduced soft body tissues to a devitalized pulp that quickly necrotized and was an ideal medium for growth of pathogenic bacteria. Continuous irrigation of the wounds with a weak chlorine solution proved to be effective.

A new weapon of World War I was poisonous gases: chlorine and mustard gas. The nurses are credited with developing treatments to deal with this war technology. Gas does extensive damage to the body in affecting the eyesight and the pulmonary tract while causing extensive burn damage (Kalisch & Kalisch, 1974, p. 318).

World War II brought still new challenges in nursing with the use of airplanes for evacuation of the sick, wounded, and injured. Included in the course of study were aeromedical physiology, flight-related mental hygiene, air evacuation tactics, plane loading procedures, and survival.

The Korean War combined the air evacuation of battle casualties to MASH (mobile army surgical hospitals) units and then to the hospital ships located in Korean waters. Fatality rates among the injured were low due to the availability of prompt and effective first-aid treatment, rapid evacuation by helicopters, and surgical treatment

near the scene of action (MASH units). Flight nursing continued to refine and mature through the course of the war and eventually replaced the hospital ship as a means of transporting the wounded (Kalisch & Kalisch, 1978, p. 550).

Nurses arrived in Vietnam in March 1962. The MASH type unit hospitals were used less in Vietnam and largely replaced by MUST units. The MUST hospitals were fixed installations assigned to area-support missions. These hospitals were semipermanent, air-conditioned, and fully equipped. Evacuation was done by air because of the insecurity of road networks in combat areas. The wounded received complete, rapid health care. Almost 99% of the soldiers hospitalized for wounds, diseases, and injuries recovered, with about 90% returning to duty (Kalisch & Kalisch, 1978, p. 630). The triage system of care was refined by the nurses in Vietnam. The wounded were brought in and a nurse sorted through and assigned priorities of care: to surgery as a first priority, those able to wait, or to the expectant category (those expected to die).

Postwar Mental Health Adjustment

The literature on postwar mental health adjustment relative to this study falls into two areas. The adjustment process of Vietnam veterans comprises the largest body of literature. This will be reviewed first.

A smaller body of literature speaks to the postwar adjustment of healthcare providers. This is the focus of this study and it will be reviewed in depth.

Vietnam veterans. Figley (1978) reviewed 33 studies and noted evidence that the veteran's personality, family life, and psychosocial variables correlated statistically with his current functioning. Kadushin, Boulanger, and Martin (1981) found a significant relationship between indexes of current adjustment and race, educational level, employment status, marital status, the supportiveness of early family life, and socioeconomic setting.

Two research projects used qualitative data to group postwar patterns of adjustment of Vietnam veterans. Wilson (1977) based his patterns of adjustment and personality integration on the values and character of the subjects. The first and most disturbed adjustment he labeled "acute identity diffusion." The veteran displayed a high degree of mistrust, anxiety, doubt, shame, guilt, inferiority, and isolation. The second pattern of adjustment involved partial psychic numbing and identity diffusion. The veteran was emotionally unreactive, impulsive, and egocentric. The third category encompassed the majority of veterans. They were conventional, well-adjusted, well-integrated individuals. They were not risk takers.

They wanted to forget the war and get on with the business of raising a family and succeeding in their careers. Their views about the war were negative, but without the deep-seated alienation and resentment of the prior two groups. The final group had a "post conventional humanistic orientation." They were strongly concerned with values such as integrity, justice, equity, altruism, utilitarian use of power and authority, harmony, truth, honesty, and dignity.

Egendorf (1982) based his groupings on behavioral assessments of veterans' work and personal relationships.

1. 5% of the veterans led highly disorganized lives. The men did not hold jobs, maintain intimate relationships, or make commitments on more than a day to day basis.

2. 15% of the men had erratic life patterns. They were working and relating with others but with frequent disruptions such as long bouts of unemployment and protracted periods of separation from wives, family, and friends.

3. 70% to 80% of the group led stable lives with coherent routines and responsibilities that they fulfilled despite the psychological complaints that many reported.

4. 5% to 10% of the veterans were categorized as "exemplary." They looked on their work as a meaningful contribution to society, felt confident, established strong social support, and managed to derive value from their war experience without glossing over painful memories and conflicts.

The research related to postwar stress and social support suggests that the supportiveness of the veteran's family and friends has a significant effect in reducing the severity of postwar sequelae (Egendorf, 1982; Kadushin, 1981; Martin, 1981). "Density" of the social support network and how well the members know each other as well as the veteran were identified as important in mitigating postwar stress (Kadushin, 1981). Levels of demoralization and stress varied inversely with the amount of support received from their mates and the presence of other Vietnam veterans in the support system (Kadushin, 1981; Martin, 1981).

Even the "stress response" is not one response to the war but a range of responses, the quality of which varies not only with the prewar experiences, with socioeconomic, ethnic, and racial background, and with the nature of duty and involvement in Vietnam, but also with a host of experiences and structural aspects of the veterans' postwar

lives. The significance of the past is linked to the way people currently engage or fail to engage in it.

Adjustment of healthcare providers. War takes its toll not only on the soldiers but also on the caregiver. The psychological impact on the persons providing the care has been difficult to measure. PTSD characteristics are reflected in the anecdotal stories and review of the lives of nurses in war and in their postwar adjustment.

Sir George Pickering reviewed biographical accounts of Florence Nightingale and diagnosed her as suffering from psychoneurosis after the Crimean War. Ms. Nightingale prior to the war functioned at a high interpersonal, social, and intellectual level. She returned two years later from the Crimean War at the age of thirty-six, exhausted, experiencing sleep disturbances, and feelings of anger at the War Department. In August of 1807, her breathing was so distressed that her doctor told her that her days were numbered.

> She was told that her pulse was rapid and that she was not to get up until it became normal. From that time to the end of her life she was an invalid living in bed, on a couch, or in a chair. (Pickering, 1976, p. 16)

Ms. Nightingale died at the age of 90; her "psychoneurotic symptoms" limited the quality of her life.

The first statistics indicating post-war distress of nurses are evident in the discharge records of nurses following the Spanish-American War. Harriet Lounsberry, chief nurse at a hospital in the Spanish-American War, recorded reasons for departure of the nurses who were discharged to return home (see Table 1, p. 23). Many, suffering from typhoid and exhaustion, were discharged without compensation for the service given.

More recently, attention has been given to the effects of military experiences upon women after the Vietnam War. In 1983, Schnaier testified before the Committee on Veteran's Affairs of the United States Senate on her findings of Vietnam nurses and their readjustment process. Schnaier (1983) concluded her study with four findings. First, her research provided preliminary evidence that the diagnosis of post-traumatic stress disorder may be applicable to the experience of women Vietnam veterans. Approximately one-third of the PTSD symptoms were identified by 25% or more of her subjects as presently occurring between 10 and 30 times a month. Secondly, the research provided evidence of mental health distress among the women in her sample. A "significant" minority of the sample reported suicidal thoughts, feelings of alienation, an inability to be close to someone they care about, and feeling numb or nothing inside frequently

TABLE 1

Nurses Leaving Sternberg Hospital from August 19 to September 13, 1898

Number	From	Arrival	Departure	Reason for Departure
1	Boston, MA	Aug. 7	Sept. 10	Overworked
2	New York City	Aug. 7	Sept. 8	Diarrhea
3	New York City	Aug. 7	Sept. 8	Diarrhea
4	Newark, NJ	Aug. 7	Aug. 19	Hysteria
5	Boston, MA	Aug. 17	Sept. 13	Typhoid Fever
6	Rochester, NY	Aug. 17	Sept. 7	Exhaustion
7	Brooklyn, NY	Aug. 17	Sept. 7	Exhaustion
8	Brooklyn, NY	Aug. 17	Aug. 30	Exhaustion
9	Boston, MA	Aug. 17	Sept. 7	Exhaustion
10	Brooklyn, NY	Aug. 17	Sept. 13	
11	Pittsburgh, PA	Aug. 17	Sept. 7	High fever
12	Boston, MA	Aug. 17	Aug. 26	Broken down by night work
13	New York City	Aug. 17	Aug. 23	Diarrhea
14	New York City	Aug. 17	Aug. 30	Dismissed, not sick
15	New York City	Aug. 17	Sept. 6	Diarrhea
16	Rochester, NY	Aug. 17	Sept. 11	Diarrhea & suspected typhoid
17	Cincinnati, OH	Aug. 25	Sept. 2	Typhoid fever
18	Wilkes-Barre, PA	Aug. 25	Sept. 13	Typhoid fever
19	Boston, MA	Aug. 26	Sept. 13	Typhoid fever
20	St. Louis, MO	Aug. 27	Sept. 6	High fever
21	Wilkes-Barre, PA	Aug. 19	Sept. 13	Rheumatism
22	Chicago, IL	Aug. 23	Sept. 13	Diarrhea & high fever
23	Chicago, IL	Aug. 25	Sept. 13	Diarrhea & high fever

throughout a month period of time. Thirdly, there were positive, growthful aspects associated with the Vietnam experience for many of the women in her study. And finally, her sample indicated that biographical and demographic factors in the women Vietnam sample are different from men Vietnam veterans in large scale studies.

A personal account of the effects of the Vietnam conflict occurred when Norma Griffiths-Boris testified before the House Subcommittee on Hospitals and Health Care on March 3, 1983. She served in Vietnam as an Army nurse from September 1969 to September 1970 in Qui Nhon, a casualty-receiving/67th evacuation hospital. The summary of her mental health problems in her postwar readjustment years is included in Table 2 (p. 25)

Her anger at being improperly diagnosed and treated for 10 years as a schizophrenic patient is illustrated in the following comment:

> The practice of accepting a narrow range of symptoms as the normal or common ways of women to cope, puts off the attempts to define the problem. Even further not to be considered for the diagnosis of PTSD on the basis of erroneous assumptions about my experience in Vietnam, is devastating!" (Griffiths-Boris, 1983)

Ms. Van Devanter also testified before the senate as the National Women's Director, Vietnam Veterans of America. She identified areas that needed to be addressed in relation

TABLE 2

Hospitalization Data

Hospitalization	Date	Reason
1st	11/72	Overdose and diagnosis of depression; 8 ECT treatments
2nd	4/73	20 ECT treatments
	1/74	Outpatient treatment
3rd	7/74	ECT treatments
4th	10/74	ECT treatments
5th	1/75	Overdose
6th	6/75	Overdose; maintained on respirator for 4 days
7th	7/75	Hospitalized 8 months
8th	7/76	1 day (transferred)
	9th	7/76 1 day (transferred)
10th	7/76	Continuous hospitalization
11th	8/76	2 day (transferred)
12th	8/76	Continued hospitalization through September
	2/77	Permanent retirement recommended
	6/77	Outpatient therapy began
13th	8/77	12 days
14th	12/77	Pseudocyesis
	1/78	Group therapy resumed
	1/79	Amenorrhea evaluation
15th	1/79	Partial hospitalization at community-based mental health center
	6/79	Outpatient treatment
	2/82	Veteran's Administration--outpatient
16th	6/82	VA hospital (2 weeks)

to women veterans. Among the areas identified were physical medical care, mental health care, toxic chemical exposure, and research. During the 53-year existence of the Veterans Administration, minimal outreach and recognition of women veterans' war experience has occurred.

Female veterans have had difficulty in obtaining Veteran's Administration compensation if they do experience symptoms of PTSD. Atkinson, Henderson, Sparr, and Seale (1982) noted problems in the compensation board's diagnostic procedures. One problem particularly pertinent for women veterans is that rating board personnel for VA compensation sometimes only accept actual threat to life as a valid stressor. Atkinson et al. (1982) propose "idiosyncratic" disorders from stress other than that of threat to life.

> It is clear that there were forms of severe psychological stress in Vietnam which did not involve direct threat to the claimant's life--for example, witnessing the torture of others or providing medical care to severely maimed combatants in relative personal safety. (p. 1120)

Wilson, Smith, and Johnson (1985) also agree that mere exposure to death, dying, and destruction can cause PTSD (p. 152).

Posttraumatic Stress Disorder (PTSD)

The sequence of the development of the diagnostic category of posttraumatic disorder can be followed through the history of wars, and the diagnostic statistical manuals DSM I, DSM II, and DSM III.

DSM I (Diagnostic and Statistical Manual) was developed in 1952 during the Korean War. The manual delineated the "gross stress reactions" as "situations in which the individual . . . (had) . . . been exposed to severe physical demands or extreme emotional stress," in which combat situations were included. The revised manual, DSM II (1968), dropped the gross stress reaction and replaced it with (Transient) Adult Adjustment Reaction. Between DSM I and the formulation of DSM II no war existed. In contrast, DSM III (1978) incorporated the research and clinical findings related to the Vietnam war, holocaust survivors, man-made disasters (Buffalo Creek and Three Mile Island), rape and violence against women and, finally, intrafamilial violence and abuse.

DSM III (Diagnostic and Statistical Manual) (1978) contains the category Post-Traumatic Stress Disorder, the constellation of behavioral phenomena consistently seen in survivors of catastrophe.

Trauma is derived from the Greek word "wound" and is defined by Charles Figley, Ph.D., as "an emotional state of discomfort after an extraordinary catastrophe that shatters the survivors' sense of invulnerability to harm (O'Conner, 1985, p. 309).

The psychologically traumatic event is outside the range of the usual human experience. The characteristic behavioral responses include re-experiencing the traumatic event through nightmares, decreased responsiveness or involvement with the external world, followed by a variety of autonomic, dysphoric, or cognitive symptoms (DSM III, 1980, p. 236). The symptoms that Vietnam veterans experience are those which researchers have observed among survivors of the atomic bomb at Hiroshima, Korean War POW camps, the Nazi holocaust, and the Buffalo Creek Dam disaster. These symptoms are: reexperiencing the trauma, difficulty in sleeping, diminished responsiveness, and the avoidance of activities that call the event to mind.

Dr. Wilson (1980), in his testimony before the U.S. Senate, outlines the symptoms unique to the Vietnam veteran in three areas: emotional responses, cognitive ideation, and interpersonal relationships.

A. Emotional Responses

1. Psychic or emotional numbing or anesthesia
2. Depression--feelings of helplessness, apathy, dejection, withdrawal, isolation
3. Anger, rage, hostility (feeling like a walking time-bomb)
4. Anxiety--and specific fears associated with combat experiences
5. Emotional constriction and unresponsiveness to self and others
6. Tendency to react under stress with "survival tactics"
7. Sleep disturbances and recurring nightmares of combat
8. Loss of interest in work and activities; fatigue, lethargy
9. Hyper-alertness; startles easily
10. Avoidance of activities that arouse memories of trauma in war zone
11. Intensification of normal developmental growth crisis
12. Suicidal feelings and thoughts
13. Survival guilt
14. Flashbacks to traumatic events experienced in war; intrusive thoughts.

B. Cognitive Ideation

1. Fantasies of retaliation and destruction; ideological changes and confusion in value system
2. Cynicism and mistrust of governments and authority
3. Alienation; feelings estranged; existential malaise and meaninglessness
4. Tendency to be humanistic and prosocial in values, but also hedonistic and self-indulging
5. Negative self-image, low self-esteem
6. Memory impairment, especially during times of stress
7. Hypersensitivity to issues of equity, justice, fairness, equality, and legitimacy

C. Interpersonal Relationships

1. Problems in establishing or maintaining intimate relationships
2. Tendency to have difficulty with authoritative figures
3. Emotional distance from children and concern about anger alienating children, wife, and others
4. Self-deceiving and self-punishing patterns of intimacy functioning:

    a. Inability to talk about war experiences and personal emotions
    b. Fears of loss of others, rage, losing control, or wanting to secretly return to Vietnam
    c. Tendency to explode in fits of rage and anger; especially when disinhibited by drugs.

(Wilson, 1980, pp. 8-9)

John Wilson's (1980) Forgotten Warrior Project is one of two large-scale scientifically sound research investigations published following Figley's primary request for research. Wilson in his project attempted "to combine psychosocial theories of personality and life-span development into a framework that permits a more holistic look at how the Vietnam War affected the veteran's reentry into the mainstream of society" (Figley, 1980, p. 126). Wilson used Eric Erickson's theory of psychosocial development in his conceptual framework (ego-identity formation, interpersonal intimacy, alienation, and intrapsychic conflict in the process of personality

integration) to identify how the traumatic event influences stages of development.

In March 1981, the VA government grant study entitled Legacies of Vietnam: Comparative Adjustment of Veterans and Their Peers was released (Egendorf, 1981). It reported these findings:

a. Only one-quarter of Vietnam veterans believe the war had little or no effect on them. In general, these men had little direct exposure to death and had only remote relationships with the Vietnamese.

b. Comparatively few Vietnam veterans (16.6%) believe the war had a distinctively negative psychological impact; heavy combat veterans are much more likely to make that assessment (29.6%).

c. Although the majority of Vietnam veterans do not believe the war had a long-term effect on their personal development, it is clear the impact of combat and death was profound.

d. Combat exposure is associated with self-reported drinking problems among whites.

e. Married veterans, especially Vietnam veterans, are better off than unmarried men; it is positive social support that counts, not merely being married.

f. Vietnam combat veterans report more anger and hostility than their peers.

(Egendorf, 1981; pp. 24, 35-37, 47)

Female Veterans' Studies Compared to Male Veterans

Attempts to compare women's readjustment and available data on men's readjustment shows some

similarities and some dissimilarities. Two studies of women veterans' readjustment have been done (Schnaier, 1982; Stroud, 1983). Their findings indicate that women nurse veterans were older than the soldiers. The mean ages of nurses serving in Vietnam was 25, while male veterans were 19.2. Schnaier (1982) first provided preliminary evidence that post-traumatic stress disorder (PTSD) may be applicable to the experience of female Vietnam veterans. The greatest stressors identfied by the Vietnam nurses were shortages of supplies, continual streams of casualties, negating emotions, and seeing the mutilation of young bodies. Schnaier (1982) and Stroud (1983) both report evidence of mental health distress among their Vietnam veteran women. Stroud's (1982) Vietnam veteran women reported more difficulties in psychopathology and interpersonal relationships than the female control group and less than the male Vietnam combat veterans.

Schnaier (1982) and Stroud (1983) both found difficulties in their studies with physical symptomatology. In Schnaier's study, the scale designed to elicit physical symptoms, was confusing to the women and had no reference to current medical or physical health problems. Stroud's (1983) measurement of physical health did not discriminate among her three groups; "the veterans in this study did not appear to express delayed stress reactions in

psychophysiological ways . . . as measured by the inventories used" (p. 56). Further attention needs to be paid to an instrument that better discriminates between physical and emotional relationships.

Similar to Egendorf's (1981) study of men, Schnaier's (1982) women reported that for some there were positive, growthful aspects associated with the Vietnam experience such as camaraderie, autonomy, and ability to perform skills not routinely done in civilian nursing. This positive aspect is a rarely examined phenomenon that may mediate effects on current adjustment.

Nursing in Vietnam Versus Civilian Nursing

Similarities in the stressors that Vietnam nurses faced and stressors that civilian nurses face will be reviewed. For the past two decades, researchers have been interested in identifying job-related stressors of nurses. Difficulties continue to exist in precise definitions and research methodology for psychosocial variables. Kasal (1981) speculates that pathogenic processes in a work environment require four characteristics. These criteria are not unlike the demands of the work environment for the nurses in Vietnam. He identifies the following:

1) The stressful work condition tends to be chronic rather than self-limiting.

> 2) Habituation or adaptation of the chronic situation is difficult and, instead, some form of vigilance or arousal must be maintained.
>
> 3) Failure to meet the demands of the work setting has serious consequences (i.e., life and death responsibilities).
>
> 4) There is a spillover of the effects of the work role on other areas of functioning (e.g., family, leisure) so that the daily impact of the demanding job situation becomes cumulative and health threatening rather than daily defused and erased.
>
> (p. 63)

Studies of occupational stress in civilian nursing have generally evolved around critical care units, emergency rooms, oncology, and burn units. Studies have identified that high levels of stress result in staff burnout (Cartwright, 1979; Freudenberger, 1974; Maslach, 1979), staff turnover (Kramer, 1974; Nixhola, 1971), and adversely affect patient care (Meyer & Mendelson, 1961). The stressors identified are inadequate work space and other inefficient factors in the physical environment, conflict with other health care providers (Epting, 1981; Bailey, 1980), feeling inadequately prepared to meet the emotional demands of patients and their families (Epting, 1981; Grey-Loft, 1981), and finally, unresponsive nursing leadership (Bailey, 1980). While these elements are similar to what nurses faced in Vietnam, the Vietnam nurse experienced additional stressors, which included: 24-48 hour shifts in the event of mass casualties (Sweetman,

1984; Van Devanter, 1983); the lack of personal supplies (Paul & O'Neill, 1984); the totality of the physical environment (mud, filth, humidity, latrines) (Van Devanter, 1983; Wilson, 1982); death and mutilation of young men's bodies (Schnaier, 1982); fear for personal safety (Schnaier, 1982); and the shift of nursing priorities to medical skills (Clay, 1984; Di Paolo, 1983; Stroud, 1983). Nurses' emotional reactions to death and illness in their patients were not expressed, but suppressed (Fay, 1983; Kessler, 1982; MacPherson, 1984; Sandeki, 1984; Sweetman, 1981; Van Devanter, 1983). The nurses were given enormous clinical responsibilities that often led to feelings of insecurity and of not being adequately prepared.

Rose Sandeki (1986) clearly outlines the differences for civilian nurses who work in areas of daily trauma and the Vietnam nurse. Civilian hospital staff work shorter hours, the volume of patients is lower, they can go home to comfortable surroundings at the end of their shift, and the validity or rationale for a car crash is not questioned, unlike the actions of war (Sandeki, 1986, p. 5).

Predisposing Factors for PTSD

Literature has identified that Vietnam nurses and their male combat veterans share similar factors that increased their risk for the development of PTSD. The

three identified factors are: the nature of the war, the limited tour of duty, and the unpopularity of the war in the United States. These factors increased the likelihood that they would experience PTSD. Each factor will now be addressed separately.

The Nature of the War

In Vietnam the unseen enemy was not always a uniformed soldier, but every Vietnamese man, woman, or child was potentially a precursor of death or mutilation. A Vietnamese co-worker by day may be an unseen enemy by night. Nurses were also assigned to wards that housed enemy prisoners-of-war. The transition from working with U.S. soldiers and the prisoners of war caused conflict within the nurses.

> Margaret had just finished working six hours in the emergency and operating rooms trying, in vain, to save the lives of five American men who had been wounded by a Viet Cong sniper. When she went to the surgical ward to visit a friend, she was told the sniper had been wounded and was now a patient on her ward. (Jacobs, 1983, p. 36)

Most soldiers and nurses in Vietnam felt that the war was meaningless, absurd, and wasteful (Egendorf, 1981; Lipkin, 1982; Resing, 1982). The absence of clear rationales for the U.S. military involvement and restrainment in their military capabilities infused a sense of

frustration, futility, and anger at both the Vietnamese and the U.S. government. Many veterans reported that they felt militarily impotent and they were in a no-win situation. The nature of the war made it difficult to justify the deaths (Huppenbauer, 1982, p. 1699). One nurse comments:

> It was in a Vietnam veterans group that I realized all my hatred for the Vietnamese and my wanting to kill them was really a reflection of all the pain that I had felt for seeing all these young men die and hurt . . . and how much I cared about them and how much I would stand there and look at them and think to myself, "You've just lost your leg for no reason at all," or "You're going to die and it's for nothing." For nothing. I would never, never say that to them, but they knew it. (Smith, 1981, p. 148)

Limited Tour of Duty

The second characteristic unique to Vietnam is the date of expected return from overseas (DEROS). The Vietnam War was an individual's war. Unlike prior wars, the soldiers and nurses went as individuals and not primary groups. This undermined group cohesiveness and unit integrity, which decreased emotional support available to cope with combat stressors (Resing, 1982; Wilson, 1980).

Review of anecdotal information reflected that some nurses were in their first assignment in Vietnam for six months and then were rotated to another unit. The individualized rotation made it difficult for nurses to form stable supportive relationships.

The individually oriented 12-month rotation resulted in the soldier or nurse returning home alone, via jet, in a matter of 48 hours. Troops in World War II returned home aboard a battleship in which they could debrief and decompress as a group their war experience. The lone Vietnam veteran returned to an often unreceptive, hostile United States (Blank, 1982; Santoli, 1981; Van Devanter, 1982). The isolation from peers did not allow veterans to share their experiences, thoughts, feelings, and difficulties, which would have permitted some processing of the experience.

Unpopularity of the War

The third predisposing characteristic of Vietnam that increased the risk of PTSD was the social and political climate in the United States. The war chaotically concluded in defeat of the U.S.-supported Saigon government. The peers of the veterans were engaged in antiwar demonstrations. Unlike in World War II, the United States was not receptive to the needs of the veteran (DeFazio, 1978). Nurses in Da Nang returning to the United States were jokingly given instructions which they were to give to their friends to help them understand the returning nurse . . .

> NEVER, we repeat, Never, let her close enough to witness a group of peace marchers demonstrating against the war in Vietnam. This may cause a psychic fit and result in a tear-faced woman screaming at, and scratching, some bearded soul. (Sandeki, Appendix)

The instructions were meant to be humorous.

Women in Jacobs's (1983) study all expressed anger and hostility toward the antiwar protestors. The women did not feel that the ideology of the war or the government's policies were being attacked by the protestors, but felt that they were personally blamed for the war. Women, like the men, returned home with demonstrators calling them warmongers and babykillers, yet women had an additional stigma associated with their time served: they were often thought of as prostitutes.

Since the Crimean War, nurses in battlefields have had the societal stereotype of prostitutes.

> Every Vietnam vet was told he was a fool, a real sucker, for going over there, but for women it's been even worse. People figure you were either a hooker or a lesbian if you were a woman in the Army in Vietnam. Why else would a woman want to be with 500,000 men unless she was servicing them? (Van Devanter, 1981)

Jacobs (1983) illustrated the experience of two of the nurses with the stigma of prostitution. Nurse Megan, prior to her departure to Vietnam was told by her fiancee not to "come home rich." A mother of a nurse, upon her

return home from Vietnam, accused her daughter of being a whore in Vietnam and refused to acknowledge her daughter's role as a nurse. Another Vietnam nurse tells about the sexual harassment that came from her male peers:

> I was not accustomed as a female (U.S.) to being treated, attacked (verbally) like flies on a piece of meat in the hot sun--the degree of sexual harassment by the troops was incredible and unnerving--I found it disturbing to believe that sex was more important to most of the guys than life itself. (Schnaier, 1982, p. 184)

Eight other psychosocial stressors of the milieu in Vietnam have been identified in Paul and O'Neill's study.

- The short time in service in nursing prior to going to Vietnam (reality shock and biculturation of the new nurse)
- The numbers, youth, and severity of the casualties (death anxiety and feelings of helplessness)
- Specific treatment areas in which they functioned (emergency triage, operating room, and intensive care ares)
- Lack of supplies (personal and medical) - environmental limitations
- Exposure to sexual harassment
- Problems with some professional relationships interpersonal relationships

(1984, p. 100)

One-third of the nurses sampled by Paul and O'Neill

reported adverse aftereffects from their one-year experience (p. 101).

A supportive environment for healing was not present when the veterans returned home. The veterans were isolated from each other and their environments were not conducive to seeking help. Wilson (1980) succinctly summarized the difference in the Vietnam War from other wars when he stated, "The typical combatant had to face twin sets of stressors: those indigenous to the guerrilla war and those generated by the dissonance produced by ideological incongruency." Nurses had stresses from their professional role as nurses and personal role as women. The longterm psychological and physiological functioning of combat nurses deserves further study.

Conceptual Framework

The review of the literature illustrates the unique aspects of war and war's emotional impact upon its participants. For some Vietnam nurses the intensity and emotional impact of their experience remains. The conceptual framework addresses the relationship between the experience of an overwhelming stressful event and subsequent health status.

The conceptual framework is based on three theorists and their extensive work in the past 10 years on

posttraumatic stress disorder. J. B. Newman's model (1984) describes the emotional and behavioral processes observed in psychotherapy with PTSD veterans. Mardi Horowitz (1986) conceptualized the role cognitive processing plays in a traumatic event. Wilson, Green, and Lindy (1985) delineated the factors involved in the development of PTSD.

How emotion is expressed somatically or how emotion may precipitate physiological dysfunction is still not known. Newman (1984) introduces posttraumatic stress disorder as a prototypic syndrome that may allow a detailed study of the effects of emotions in the maintenance or loss of physical well-being over time (p. 177).

Phase I of Newman's triphasic emotional/behavioral process addresses the coping methods and strategies utilized to suppress the traumatic experience (Appendix H).

> Since coping is a process, time will tell if the defense is effective and supportive or is becoming ineffective, threatening, and harmful. Defenses in and of themselves are not necessarily harmful, uneconomical, or unrealistic in meeting the demands of the environment at a specific point in time (Schmale, 1982, p. 194).

The coping process of denial and "psychic numbing" of emotional experience served well in Vietnam. This coping process carried the individual through the traumatic experience, yet now may prove not to be an effective coping technique for the individual.

Phase two of Newman's process describes the underlying emotions of rage, terror, guilt, and anxiety that emerge as the person begins to deal with the traumatic experience.

The final phase is the emergence of healing emotions and behaviors. There is a reemergence of prosocial behavior and affiliative emotions; an increased report of feelings of self-worth and pride; a redirection of anger toward constructive ends; and grieving over the event with full expression of grief. The interest in building a memorial to the nurses next to the Vietnam Memorial in Washington, D.C., is an example of a present healing behavior. Open grieving is evidenced still today by those visiting the memorial.

Newman is concerned with the physiological manifestations of the emotions and does not include physical illness in his triphasic model. This feature helps to avoid the difficulties in measuring physical illness reported by other researchers. Both Schnaier (1982) and Stroud (1983) had measures of physical illness that were either confusing to the women or that were not sufficiently sensitive to the psychophysiologic symptoms. Sixty-five (47%) nurses in Paul and O'Neill's sample report that they experienced one or more physical disorders since they returned to the United States. Forty-six (33.6%) of

these nurses continue to have problems with physical disorders (p. 61).

Cognitive processing of a traumatic event addresses the intrusion/avoidance cycle in the individual's attempt to cope with the event. Horowitz (1986) identified the normative stages for cognitive processing of a traumatic event. The initial stage is outcry in the presence of fear, sadness, and rage. In this stage the pathological response is one of being overwhelmed. This stage is followed by the interactive phases of denial and intrusion. Denial is the refusal to face memory of the disaster and intrusion is defined as the unbidden thoughts of the event. The pathological responses of these interactive phases are panic/exhaustion or extreme avoidance. Working through is the next stage. If the event is not worked through, a pathological response persists whereby the person is flooded with images and thoughts of the event. The pathological responses of this stage include psychosomatic responses and character distortions. Completion and going on with life is the final stage.

A major mechanism of human cognitive processes is the completion tendency in which the mind continues to process information until reality and inner modes reach accord. Until completion occurs the traumatic stress event is in active memory. Active memory has the intrinsic tendency to

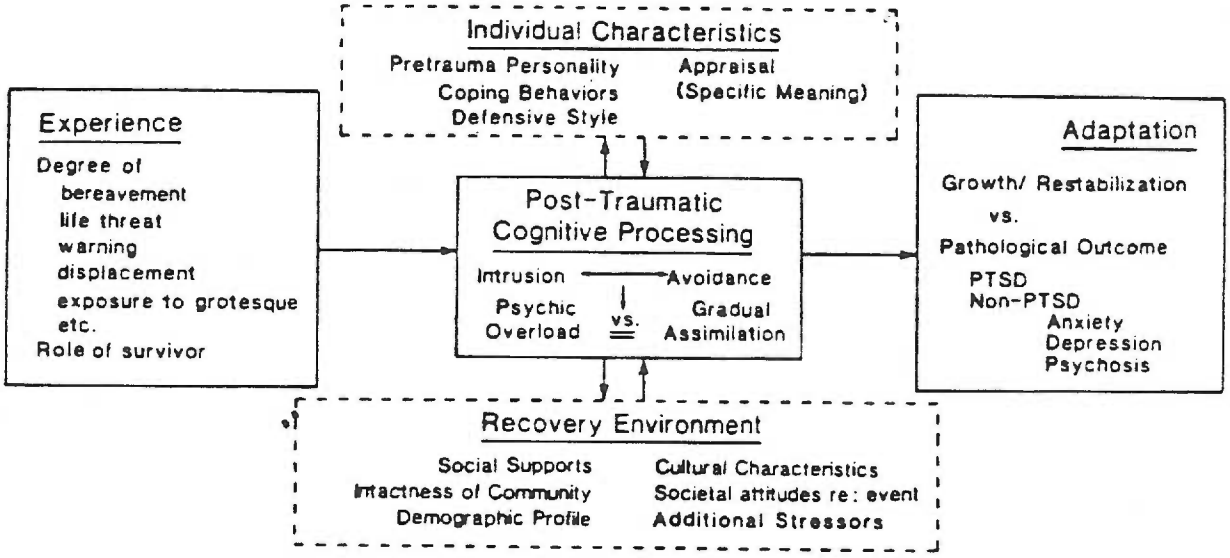
repeat the event and until a traumatic life event can be assimilated and successfully integrated into the person's existing schemata, the psychological elements of the event will remain active (Horowitz, 1986, p. 94). Cognitive processing of an event is a major component of Wilson, Green, and Lindy's model for the development of PTSD.

Wilson, Green, and Lindy's (1985) model for the development of PTSD incorporates the traumatic events, the individual's characteristics, the recovering social environment, and cognitive processing of a trauma (see Appendix G). The model describes the processing of a traumatic event at an individual level. This implies that the same event will have different outcomes for different people because "not only will their experiences differ, but the individual characteristics they bring to bear upon the psychological processing are different, and this processing may take place in different recovery environments."

The traumatic event is further defined by the degree of bereavement experienced, speed of onset of the event, duration, degree of life threat, role of the person in the trauma, potential for recurrence, degree of moral conflict, and degree of exposure to death, dying, and destruction. Individual characteristics of the pretrauma personality, coping behaviors, and defensive styles are included in the

Figure 1

Working Model for Development of Post-Traumatic Stress Disorder



(Green, Wilson, & Lindy, 1985)

model. The dimensions of the recovery social environment include the intactness of the community, social supports, cultural characteristics, and societal attitudes towards the event. The work of Wilson, Green, and Lindy (1985) provides the working model for this study. The conceptual model for this study is presented in Figure 2. It is beyond the scope of a master's thesis project to incorporate the total working model for PTSD. Therefore, the conceptual framework of this study utilizes four of the concepts. These concepts are traumatic event, personal/ social characteristics, intrusive thoughts/avoidance behaviors, and health status. As shown in Figure 2, it is assumed that traumatic events lead to intrusive thoughts and avoidance behaviors and these together with the background and personal characteristics of an individual are associated with physical and psychological health. Figure 3 is the operationalization of the conceptual model. The corresponding tools used to measure the variable in the study are presented.

A number of assumptions underlying this framework:

1. The Vietnam war-zone nursing experience is a psychologically traumatic experience that is outside the range of usual human experience.

2. Attempts to cognitively process the event include avoidance behaviors and denial.

Figure 2. Conceptual Model

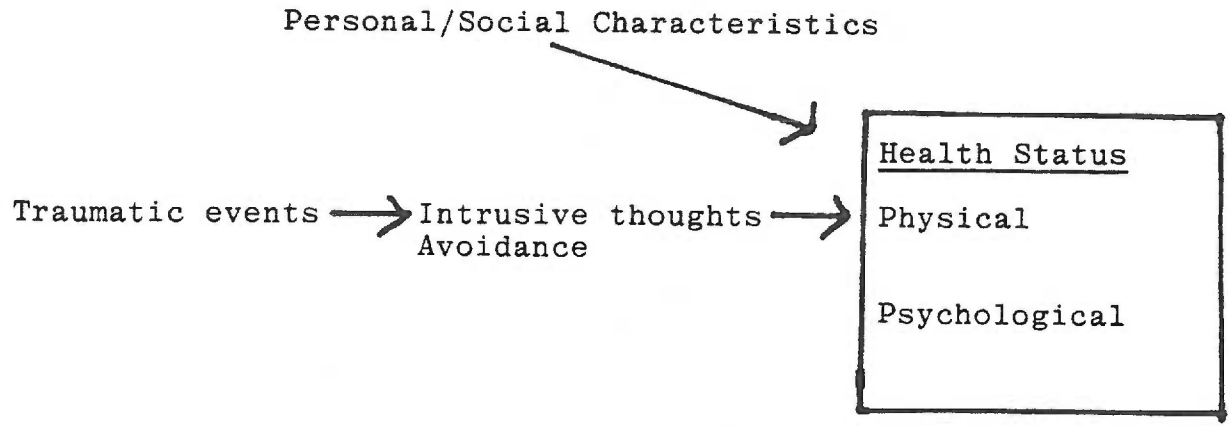
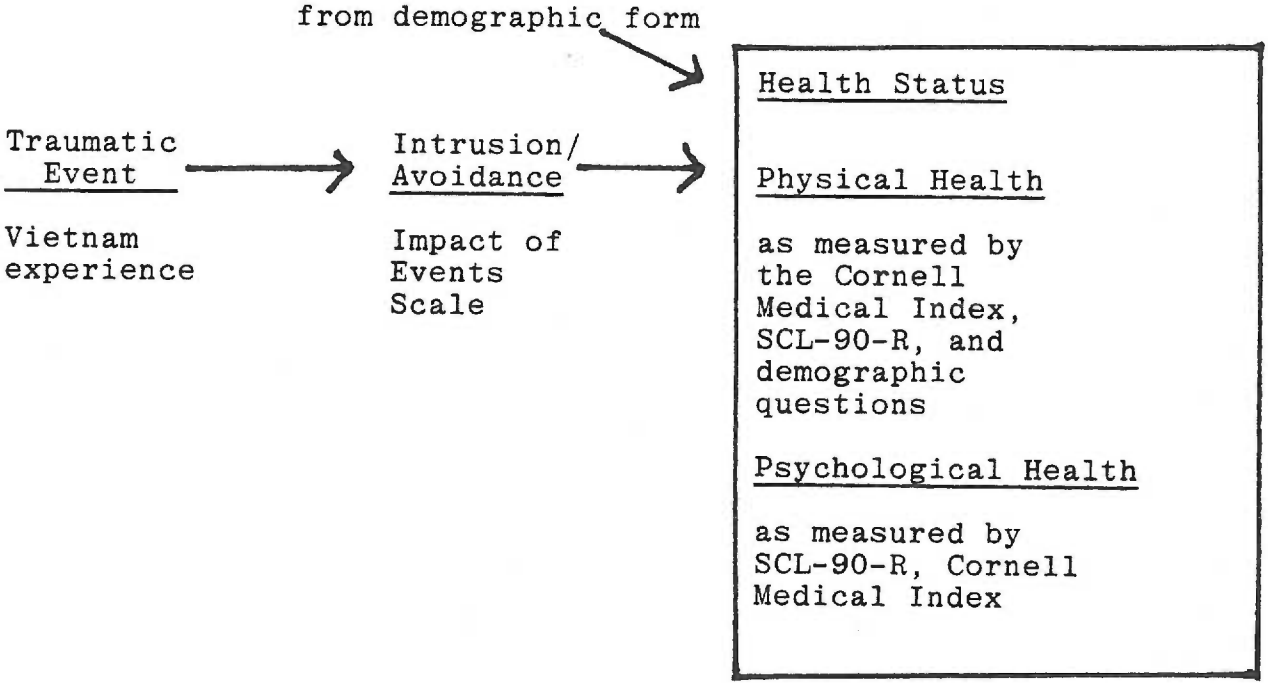


Figure 3. Operationalization of Conceptual Model



3. Intrusive thoughts of an event are indicative of ongoing distress and reflective of the individual's inability to maintain a denial system.

4. Anxiety or the ability to maintain ego defenses associated with the denial is expressed in physiological symptoms.

Definitions of Terms

1. Vietnam nurse: A registered nurse stationed in Vietnam during the Vietnam war between August 1964 to May 1975, excluding evacuation nurses.

2. Evacuation route nurse: A registered nurse stationed outside of Vietnam in evacuation hospitals in the Philippines, Ryukyu Island, Japan, and Thailand. Included in this category are the Air Force nurses who transported wounded from Vietnam to the evacuation hospitals.

3. Posttraumatic Stress Syndrome (PTSD): As defined by DSM III (see Appendix G).

4. Physiological manifestations of illness: As measured by the Cornell Medical Index of Health Status. Also in the demographic form this will refer to the frequency and type of physiological stress symptoms elicited (headaches, ulcers, hypertension, asthma, dysmenorrhea).

5. Psychological manifestations of illness: As measured by the Cornell Medical Index (Inadequacy, Depression, Anxiety, Sensitivity, Anger, and Tension scales), the SCL-90-R (depression, anxiety, hostility, phobic anxiety, interpersonal, obsessive-compulsive, paranoid, psychoticism, and somatization scales) and questions contained in the demographic form.

6. Intrusive thoughts: Intrusively experienced ideas, images, feelings, or bad dreams of an event.

7. Avoidance behavior: Attempts by an individual to remove him/herself from the stimulus connected with the traumatic event.

Purpose of the Study

The purpose of this study was to measure the present psychophysiological functioning of military nurses and medics involved in the Vietnam war. This study is based on the belief that there may be a relationship between experiences in Vietnam and the subsequent psychological and physical health of the individual. Major questions addressed included the continued intrusiveness and avoidance of the experience of Vietnam events and the relationship between these events and current psychological and physical health. In this study relationships between

the Cornell Medical Index, SCL-90-R health status measures, and the demographic measures were also examined.

Research Questions

1. What is the relationship between intrusiveness and avoidance of an event as measured on the Impact of Events scale and the current health status as measured by the Cornell Medical Index and the SCL-90-R?

2. Is there a relationship between personal/social characteristics and present health status as measured by the Cornell Medical Index and the SCL-90-R?

CHAPTER 3

METHODOLOGY

Design

This descriptive study was designed to evaluate the current physical and psychological health of nurses who served in the Vietnam war. The survey technique of data collection was employed. The questionnaires were designed to look at physical and psychological health, symptoms of distress after a traumatic event, and the current psychological impact of an event.

The sampling plan employed was that of convenience sampling. The target population of nurses involved in the Vietnam war for the Pacific Northwest is unknown. The population is therefore self-selected individuals willing to disclose that they were in the military and involved in the Vietnam war. The rationale for this type of sampling included the known difficulty there would be in finding participants (Polit & Hunger, 1978, p. 454).

Subjects

Subjects were contacted through poster advertisement. Posters were mailed to the Vet Centers in the Pacific

Northwest and Hawaii. The Oregon Nurses Association newsletter published a notification of the study. Each director of nursing for hospitals in the state of Oregon was sent a poster asking for participants from their hospitals. The newsletter for women veterans of the war, So Proudly We Hail, and the publication about women in the military, Minerva, also included the poster. Two participants of the study enclosed the poster in a newsletter to others in their Vietnam units. One participant included names of those nurses she knew. These nurses were sent packets. All participants were in the military between the dates of May 1965 through the fall of Saigon in April 1975.

The advertisement for the study was worded "healthcare professional involved in the Vietnam war." Packets were sent to all those who indicated a willingness to participate. The 44 participants included 29 Vietnam nurses, a subgroup of 9 Vietnam medics, 3 of whom are now nurses, and a subgroup of 6 nurses in neighboring overseas areas. A total of 60 questionnaires were mailed out. Of the 49 subjects who returned questionnaires, 5 were not eligible for the study. The ineligible subjects were a nurse who worked in Japan distributing cookies, an air traffic controller in Vietnam, a ground controller of the Med-evacs at Travis Air Force Base, California, a nurse who

TABLE 3

RESPONSE RATE FOR THE RESEARCH STUDY

60	questionnaires mailed out
5	not eligible for study
55	55 eligible questionnaires
11	did not return
44	returned eligible
44/55 = 80%	survey return rate

was not in Vietnam or overseas but is currently in the reserves, and a nurse who had not been in the service. The response rate for the study is 80%.

Subjects were divided into 3 groups. Group 1 is composed of 29 Vietnam nurses (2 male, 27 female). Group 2 consists of 9 male Vietnam medics. Group 3 is comprised of those stationed overseas. This group includes 1 medic (male) and 5 nurses (female). Three of the overseas nurses flew into Vietnam but were not stationed there.

Characteristics of the Subjects

Vietnam nurses (n = 29). The mean age for the Vietnam nurse was 41.4 at the time of the study. While in Vietnam the age range most commonly reported was 20-24 (72.4%). Nurses in Vietnam had either a diploma or baccalaureate educational level and a military rank of either First Lieutenant, Captain, or Major. Most Vietnam nurses were in the military more than 6 months before going overseas (79.3%). Most of the nurses served in Vietnam during 1968 (37.9%) and 1970 (34.5%).

At the time of the study, 51.7% of the Vietnam nurses were married, 37.9% had a Master's degree, and most were presently employed as nurses (75.9%). For those nurses employed, no consistent pattern of specialty emerged in their nursing practice. Most (60%) indicated that they

were employed in other than traditional areas, which include: corrections (2), student education director, insurance company, endoscopy lab, IV therapy, mental health counselor, industrial, employee health service, health department, volunteer work, supervisor over obstetrics/ pediatrics/neonatal intensive care and an inpatient coordinator of a multiservice ward (obstetrics/labor and delivery/acute care unit). (See Tables 3 and 4).

Vietman Medics (n = 9). The medics as a group were male, younger than their nurse counterparts, had lower military rank, and had less educational preparation. At the time of the study, the mean age for the medics was 38.1 and the age range most common while in Vietnam was 18-20 (67%). Medics were located in the smaller medical facilities (e.g., dispensary, infantry platoon and first aid station, "field hospital," and evacuation hospitals of less than 50 beds. The rank of the medic is E4 or E5, which is a noncommissioned officer rank (NCO). Most medics served in Vietnam during 1970 (56%).

Medics, at the time of the study, were employed in health related fields such as respiratory therapy, radiation therapy, an orthopedic technician in the ER, and an orthopedic physician's assistant. Since Vietnam, three medics have become nurses and reported working in ICU/CCU

TABLE 4

CHARACTERISTICS OF THE VIETNAM NURSES SUBGROUP WHEN IN VIETNAM (1968-1971)

(n = 29)

CHARACTERISTIC	NUMBER	PERCENT
Sex		
Male	2	6.9
Female	27	93.1
Age		
20-24	21	72.4
25-29	5	17.2
30-34	1	3.4
35-39	1	3.4
40-50	1	3.4
Race		
Black	1	3.4
Caucasian	26	89.7
Hispanic	1	3.4
Other	1	3.4
Branch		
Army	24	82.8
Air Force	5	17.2
Time in Service Prior to Overseas		
Less than 6 months	6	20.7
More than 6 months	23	79.3
Rank		
First Lieutenant	19	65.5
Captain	8	27.6
Other	2	6.9
DEROS (date of expected return from overseas)		
1968	11	37.9
1969	6	20.7
1970	10	34.5
1971	2	6.9
Type of Facility		
Field Unit	2	6.8
Evac Hospital, 26-50 beds	1	3.4
Evac Hospital, 51-100 beds	2	6.8
Evac Hospital, 101-300 beds	13	44.8
Casualty Staging Unit	4	13.7
More than 1 Answer	6	20.6
Other	1	3.4

TABLE 5

CURRENT CHARACTERISTICS OF VIETNAM NURSE

(n = 29)

CHARACTERISTIC		NUMBER	PERCENT
Age			
Range	37-64		
Mean	41.4		
S.D.	0.9		
Median	40.2		
Marital Status			
Never Married		5	17.2
Married		15	51.7
Separated		2	6.9
Divorced		7	24.1
Race			
Black		1	3.4
Caucasian		26	89.7
Hispanic		1	3.4
Other		1	3.4
Education			
Diploma		7	24.1
Bachelor's Degree		10	34.5
Master's Degree		11	37.9
Ph.D.		1	3.4
Employed Presently as a Nurse			
Yes		22	75.9
No		7	24.1
Present Employment as a Nurse			
Surgical		1	4.0
ICU		1	4.0
Psychiatry		2	8.0
Outpatient		1	4.0
Emergency Room		1	4.0
Recovery Room		1	4.0
OB-GYN		1	4.0
Other		13	52.0
Other (more than 1 answer)		2	8.0
Not Applicable		2	8.0
No Answer		4	16.0

and a psychiatric setting. One was a nurse's aide in the emergency room with a baccalaureate in economics. Two were not in the health care field but in business and the ministry.

Overseas Professionals (n = 6). The overseas subgroup is defined as those healthcare professionals serving in the evacuation routes outside of Vietnam (e.g., Guam, Japan, the Philippines, Thailand). The subgroup of overseas healthcare professionals was small, consisting of five nurses and one medic. The mean age of the group in 1986 was 39.8. They tended to be older while serving overseas than the Vietnam subgroup and served their tours of duty between 1969 and 1972. Three of the nurses were aeromedical evacuation personnel who flew into Vietnam for short stays and then returned to their overseas base. Sixty-seven percent of the overseas group were employed in nursing at the time of the study.

Educational Preparation of Sample. Advancement in educational level is evident among the participants. This is not an unusual phenomenon among veterans with veteran's benefits that include educational reimbursement. As Table 6 shows, this same trend is evident for all three subgroups of the sample.

TABLE 6

EDUCATIONAL LEVEL WHILE IN SERVICE AND 1986

	Service	1986
Vietnam Nurses (n = 29)		
Diploma	21 (72.4%)	7 (24.1%)
Baccalaureate	8 (27.6%)	10 (34.5%)
Master's	0	11 (37.9%)
Ph.D.	0	1 (3.4%)
Medics (n = 9)		
Army Course	7 (78%)	2 (22%)
Associate	0	3 (33%)
Diploma	2 (22%)	1 (11%)
Baccalaureate	0	3 (33%)
Overseas Personnel (n = 6)		
Associate	1 (17%)	1 (17%)
Diploma	2 (33%)	1 (17%)
Baccalaureate	3 (50%)	2 (33%)
Master's	0	2 (33%)

Procedure

Subjects were mailed a packet that contained a cover letter from the researcher, the informed consent form, a demographic form, the SCL-90-R, the impact of events scale, and the Cornell Medical Instrument for Health Assessment. A self-addressed stamped envelope was provided for the return of the completed packet. When the questionnaire was not returned by the subject within 2 weeks of the initial mailing date, a postcard was sent to each nonrespondent, asking them to complete the questionnaire.

Instruments

The Impact of Event Scale (IES) is a self-report measure that can be anchored to any specific life event and taps the two most commonly reported specific categorized experiences in response to stressful events "intrusion" and "avoidance." The IES is designed to elicit dimensions of symptoms that parallel the defining characteristics of PTSD as outlined in the DSM III. PTSD's central diagnostic features are the felt experience of intrusion and avoidance of ideas and feelings related to a serious life event (Zilberg, Weiss, & Horowitz, 1983, pp. 407-408). The purpose of the scale is to measure the current degree of subjective impact that results from a specific event.

The IES scale consists of 15 questions. The subject responds to each question by marking the appropriate number

for the degree of intensity the item has been experienced over the last 7 days. The mean scores of each item are then based on a 5 point scale where 0 = not experienced, 1 = rarely experienced, 3 = sometimes experienced, and 5 = often experienced during the week. The intrusion subset of questions are 1, 4, 5, 6, 10, 11, 14; avoidance subset questions = 2, 3, 7, 8, 9, 12, 13, 15 (Horowitz, 1986, p. 30).

The split-half reliability of the total scale is $\underline{r}$ = 0.86. As reported by Horowitz (1979, 1983):

> Internal consistency of the subscales, as calculated using the Cronbach's alpha, is intrusion 0.79 and avoidance 0.82. The correlation between scales is .42, which is small enough to infer substantial independence of the item sets while indicating some degree of covariation. Test-retest reliability of the scale is 0.87 for the intrusion subscale, and 0.79 for the avoidance subscale. Sensitivity of the IES was supported by indications of change in a population where clinical impression by experienced observers suggested such change and relevant differences in the response to discrete life events of varied magnitude. (Horowitz, Wilner, & Alvarez, 1979, pp. 209-217; Zilberg, Weiss, & Horowitz, 1983).

The SCL-90-R (see Appendix A) is a 90-item multidimensional inventory designed to measure psychological distress (Derogatis, 1981). Three types of scores can be derived from the 90-item checklist: (a) 9 primary symptom dimension subscale scores (somaticization, interpersonal sensitivity, obsessive-

compulsive, depression, anxiety, phobic-anxiety, paranoid ideation, and psychoticism); (b) a total score (PST) for the number of symptoms reported by the subject; and (c) an overall global symptom index of psychological distress. The SCL-90-R has been used with a wide variety of populations.

The SCL-90-R requires 15-20 minutes to complete. Subjects were asked to rate how much they were distressed by each of 90 different symptoms on a 5-point Likert scale. Each "distress" symptom is rated on a 5 point Likert-type scale (Derogatis et al., 1979). There are 7 "configural items" not scored collectively but included as part of the total 90 items with the global indices. Internal consistency for each of the 9 dimensions ranges from .77 to .90 (Derogatis, 1983, p. 15). A copy of this scale may be found in Appendix A.

The Cornell Medical Index (CMI) is a self-administered health appraisal tool. Individuals usually take 10 to 30 minutes to complete the tool. The CMI is four pages in length and contains 195 questions. After each question, the subject answers the questions by circling either. A "Yes" answer indicates that the subject claims to have the symptom.

Questions address four areas: bodily symptoms, past illnesses, family history, and behavior, mood, or feeling.

Related questions are grouped in sections, each headed by a letter of the alphabet.

Studies support its validity as a measure for the presence and degree of emotional ill-health. The total number of positive responses to the Cornell Medical Index has been empirically shown to be a useful indicator of emotional health. The greater the degree of emotional disturbance in a group, the higher the total score tends to be. The Cornell Medical Index is used as a screening device to detect emotional disturbance rather than as a tool for diffential diagnosis or a personality instrument. It is of relatively little value as an indicator of the presence of specific disorders, although it is a valid indicator of general overall health status (Abrahamson, 1966; Costa & McCrae, 1977). Reliability data is not available for the Cornell Medical Index (Mitchell, 1985, p. 399).

Data Analysis

The data were analyzed using the the Statistical Package for the Social Sciences computer program. Descriptive statistics were used to examine demographic data. Pearson's *r* correlation was computed to examine the degree of relationship between variables on the demographic form and the variable in each of the questionnaires (SCL-90-R, Cornell Medical Index, and Impact of Events

Scale). Significance is set at $p < .05$. The Kendall's tau, a nonparametric statistic, was also used due to the group size. Male and female data were tested separately and then a *t*-test performed to find the mean difference between the sexes. No specific gender differences were found.

The internal consistency of the SCL-90-R and Impact of Events Scale were tested for the sample. The Alpha coefficient for two subscales on the SCL-90-R is below .70. On the hostility scale, item #11 relating to irritability does not fit with the rest of the scale. Irritability has a corrected item total correlation of .21. If item #11 was deleted from the subscale, the alpha coefficient would have reached .70. On the phobic anxiety subscale, there are three items that are problematic. The overall range of responses was restricted. Item #25, "afraid to leave the house" had a zero variance. Item #82, "fear of fainting in public" had a corrected item total correlation of .21. Item #75, "feeling nervous when being left alone" had a corrected item total correlation of 0.09. For the study, the subscales were left intact and no item was removed. Table 7 shows the alpha coefficients for each of the subscales of the SCL-90-R and the Impact of Events scale.

TABLE 7

ALPHA COEFFICIENTS FOR SUBSCALES OF SCL-90-R AND THE IMPACT OF EVENTS

	Alpha Coefficient
SCL-90-R	
Somatization	.88
Obsessive-Compulsive	.89
Interpersonal Sensitivity	.84
Depression	.88
Anxiety	.83
Hostility	.64
Phobic Anxiety	.64
Paranoid Ideation	.78
Psychoticism	.77
Additional Items	.79
Impact of Events	
Intrude	.94
Avoid	.89

CHAPTER 4

RESULTS

Data regarding the psychological and physical health of several groups of individuals who cared for the wounded of the Vietnam war were gathered for this investigation. The analysis of the data looked at relationships between:

a. Intrusive thoughts and current health status

b. Avoidant behaviors and current health status

c. Demographic measures and current health status

Current health status was measured by the Cornell Medical Index and the SCL-90-R. Intrusive thoughts and avoidant behavior was measured by the Impact of Events Scale. The demographic variables were measured by a questionnaire devised for this study. Normal values for health status measures were compared with the measures for the three groups included in this study.

Grouping of Subjects

The groups are:

a. Vietnam Nurses $n = 29$

b. Vietnam Nurses, Medics $n = 38$

c. Vietnam Nurses, Medics, and Overseas Personnel $n = 44$

There was no statistically significant difference found between male and female participants on the instruments used in this study (i.e., the Cornell Medical Index, Impact of Events Scale, and the SCL-90-%). The Kendall's tau, a nonparametric statistic, was used due to the group sizes and no statisfical significance was found between groups.

Comparison of the Study Participants and the Standardized Population on SCL-90-R

The mean scores for the subgroups were compared to standardized SCL-90-R scores by use of the student's T-test. The two male nurses in Vietnam and the one male overseas medic were deleted from the sample. The three groups, female Vietnam nurses, male medics, and overseas females, were compared with the standardized population means for male and female nonpatient subjects. Statistical significance was set at an alpha level of $p < .05$. T-tests were only done on the female Vietnam nurses because the sample size was too small for the other groups. (See Table 8.)

Table 8 illustrates the mean scores for the three samples and the standardized SCL-90-R scale scores. For the 9 t-tests performed on the means for female nurses, significant differences occurred for 5 of the 9 scales. The Vietnam female nurse sample had significantly higher mean

TABLE 8

STUDENTS' T-TEST OF SAMPLE MEAN RAW SCORES
AND STANDARIZED SCL-90-R SCORES

SCL-90-R VAR	Sample Raw Mean Score	Sample Std.	Normal Raw Mean Score*	t-value**	Level sign.
Vietnam Female Nurses (n = 27)					
somatization	0.366	0.505	0.300	0.683	N/S
obsessive/compulsive	0.467	0.621	0.300	1.394	N/S
interpersonal sensitivity	0.594	0.526	0.220	3.693	< .01
depression	0.560	0.470	0.300	2.868	< .01
anxiety	0.374	0.437	0.200	2.071	< .05
hostility	0.361	0.357	0.190	2.490	< .05
phobic anxiety	0.168	0.305	0.050	2.010	N/S
paranoid	0.307	0.495	0.190	1.233	N/S
positive symptoms total	24.407	17.910	16.700	2.236	< .05
Vietnam Medics (n = 9)					
somatization	0.368	0.369	0.190		
obsessive/compulsive	0.267	0.313	0.180		
interpersonal sensitivity	0.233	0.337	0.120		
depression	0.466	0.607	0.160		
anxiety	0.189	0.465	0.140		
hostility	0.203	0.331	0.180		
phobic anxiety	0.094	0.267	0.030		
paranoid	0.201	0.356	0.200		
positive symptoms total	17.556	17.708	14.000		
Overseas Female Nurses (n = 5)					
somatization	0.080	0.072	0.300		
obsessive/compulsive	0.340	0.367	0.300		
interpersonal sensitivity	0.330	0.368	0.220		
depression	0.366	0.405	0.300		
anxiety	0.140	0.174	0.200		
hostility	0.064	0.078	0.190		
phobic anxiety	0.000	0.000	0.050		
paranoid	0.164	0.256	0.190		
positive symptoms total	14.600	11.792	16.700		

* Normal mean raw score based on gender for each group. That is, Vietnam nurses and overseas nurses were compared with female non-patients and Vietnam medics with male non-patients.

** t-tests were calculated using the standard deviation of the sample.

scale scores on the following scales: interpersonal sensitivity, depression, anxiety, hostility, and positive symptoms total.

Cornell Medical Index

Two scores on the Cornell Medical Index are used to report the findings: the M-R score and the total score. The M-R score is the number of "yes" responses to sections M through R, which deal with mood and feeling patterns. The total score is the number of "yes" responses on all sections. For the total score the use of a critical scoring level of 30 is recommended (Abrahamson, 1966). Scores of 30 or over have been useful as a screening device to discriminate "probably malajusted individuals" from "normal population" groups (Lawton, 1959, p. 355). The M-R score is reported twice: first, for those with 3 or more "yes responses, and then again for 10 or more "yes" responses. Scoring in this manner distinguishes between major and minor emotional disturbances. Nine Vietnam nurses and 1 Vietnam medic reported scores greater than 10 on the M-R score and greater than 30 on the total score.

Scores for the Vietnam nurse group (n = 29) were:

M-R score < 3 = 8 Vietnam nurses

M-R score > 3 = 21 Vietnam nurses

M-R score > 10 = 10 Vietnam nurses

Total score > 30 = 11 Vietnam nurses

M-R score > 10 and total score > 30 = 9 Vietnam nurses

Scores for the Vietnam medic group (n = 9) were:

M-R score < 3 = 3 medics

M-R score > 3 = 6 medics

M-R score > 10 = 1 medic

Total score > 30 = 2 medics

M-R score > 10 and total score > 30 = 1 medic

Scores for the overseas group (n = 6) were:

M-R score < 3 = 3 subjects

M-R score > 3 = 3 subjects

M-R score > 10 = 0 subjects

Total score > 30 = 0 subjects

Impact of Events Scale

The scores on the Impact of Events Scale ranged from 0 to 70. Eleven participants scored 0 on both the avoid and intrude subscale. The total mean score for the IES was 19.35 with a standard deviation of 19.82. The mean score for the intrude subscale was 10.9 with a standard deviation

of 11.32. The mean score for the avoid subscale was 8.23 with a standard deviation of 9.54.

Question 1

What is the relationship between intrusiveness and avoidance of an event as measured on the Impact of Events Scale and the current health status as measured by the Cornell Medical Index and the SCL-90-R?

The scores of the Vietnam nurses were examined first. They were then combined with the scores of the medics and finally the total group. For the Vietnam nurses, significant positive correlations were found between the subscales of the Impact of Events Scale and the total score (PST) of the SCL-90-R. Significant positive correlations were also found between the subscales of the Impact of Events Scale and the total symptoms score of the Cornell Medical Index. Two of the 29 Vietnam nurses did not complete the Impact of Events Scale and the data was computed utilizing an N of 27. Kendall's tau was computed for the groups because of the small sample size and the correlations remained significant.

Vietnam Nurses

(n = 27)

(a) Impact of Event Scale (intrusiveness) and CMI (total) (r = .46; p < .01)

(b) Impact of Event Scale (intrusiveness) and SCL-90-R (r = .49; p < .01)

(c) Impact of Event Scale (avoidance) and CMI (total) (r = .57; p < .01)

(d) Impact of Event Scale (avoidance) and SCL-90-R (r = .58; p < .01)

Correlations were computed on the medics and Vietnam nurses as a combined group. There continues to be a positive correlation for intrusiveness and avoidance on the Impact of Events Scale and the total score for the SCL-90-R and the total symptoms score on the Cornell Medical Index.

Medics and Vietnam Nurses

(n = 38)

(a) Impact of Event Scale (intrusiveness) and CMI total (r = .46, p < .01)

(b) Impact of Event Scale (intrusiveness) and SCL-90-R (r = .55, p < .001)

(c) Impact of Event Scale (avoidance) and CMI total (r = .48, p < .01)

(d) Impact of Event Scale (avoidance) and SCL-90-R (r = .54, p < .001)

Correlations were then computed for the total group including the 6 overseas personnel. A positive correlation was found with the subscales of the impact of events and the total scores on the Cornell Medical Index and SCL-90-R.

Vietnam Nurses and Medics and Overseas Personnel

(n = 42)

(a) Impact of Event Scale (intrusiveness) and CMI total (r = .54, p < .001)

(b) Impact of Event Scale (intrusiveness) and SCL-90-R (r = .55, p < .001)

(c) Impact of Event Scale (avoidance) and CMI total (r = .55, p < .001)

(d) Impact of Event Scale (avoidance) and SCL-90-R (r = .54, p < .01)

The avoid and intrude subscales then were correlated for each subscale of the SCL-90-R and Cornell Medical Index. Data regarding these subscales are found in Table 9 (p. 75) and Table 10 (p. 76). Every subscale measure for the SCL-90-R and Cornell Medical Index correlated positive and significantly with the avoid and intrude Impact of Events subscales. In summary, there was a positive relationship between the Impact of Event Scale and the health measures, both on total scores and for each of their subscales.

Question 2

Is there a relationship between the demographic variables of the participants and their present health status as measured by the Cornell Medical Index and the SCL-90-R?

TABLE 9

SELF-REPORT SCALES: CORRELATIONS WITH SUBSCALES IES AND SUBSCALES OF THE CMI FOR VIETNAM NURSES (n = 29), VIETNAM NURSES AND MEDICS (n = 38) AND TOTAL SAMPLE (n = 42)

(N = 42)

	Avoid	Intrude	COSS	OBC	Moods & Feelings	Total
AVOID						
Vietnam nurses		.80**	.55*	.42	.46*	.56*
Nurses & medics		.78**	.49*	.35	.42*	.48*
Total		.79**	.54**	.47*	.48*	.55**
INTRUDE						
Vietnam nurses	.80**		.44*	.34	.42	.46*
Nurses & medics	.78**		.46*	.40*	.48*	.50*
Total	.79**		.50**	.45*	.51**	.54**

* p < .01
** p < .001

(All correlations are significant at p < .05 level)

TABLE 10

SELF-REPORT SCALES: CORRELATIONS WITH SUBSCALES IES AND SUBSCALES OF THE SCL-90-R FOR VIETNAM NURSES (n = 29), VIETNAM NURSES AND MEDICS (n = 38) AND TOTAL SAMPLE (n = 42)

(N = 42)

	Somat	OBCOM	Interse	Depr	Anxi	Host	Phoax	Parid	PST
AVOID									
Vietnam nurses	.50*	.39	.52*	.43	.54*	.40	.54*	.68**	.58*
Nurses & medics	.45*	.40*	.49*	.39	.43*	.35	.46*	.61**	.54**
Total	.47*	.41*	.50**	.42*	.45*	.38*	.48*	.59**	.54*
INTRUDE									
Vietnam nurses	.45*	.35	.40	.36	.53*	.43*	.36	.42*	,49*
Nurses & medics	.45*	.41*	.48*	.45*	.55**	.49*	.41*	.45*	.55**
Total	.49**	.40*	.48*	.45*	.56**	.53**	.44**	.44*	.55**

* p < .01
** p < .001

(All correlations are significant at p < .05 level)

Personal/Social Characteristics

The demographic form contained 33 questions. Ten personal/social characteristics were chosen for analysis due to their postulated relationship with physical and mental health. The remaining variables were used to describe the sample. The variables selected for examination relative to physical and psychological health were:

1.	Current social contact with others who were overseas.	(YES/NO)
2.	Traumatic events since time in service	(YES/NO)
3.	Mental health assistance prior to the study	(YES/NO)
4.	Currently involved in therapy	(YES/NO)
5.	Alcohol use	(0-1/2-4)
6.	Disability or injury sustained while in the service	(YES/NO)
7.	Length of active duty before going overseas	(< 6 mo./> 6 mon)
8.	Length of time in service	(< 48 mo./> 48 mon)
9.	Current symptoms	(YES/NO)
10a.	Exposure to chemical defoliants (N = 44)	(YES/NO-DO NOT KNOW)
10b.	Exposure to chemical defoliants (do not know = missing data) (n = 9)	YES/NO)

The majority of participants (n = 25) indicated that they did not know if they had been exposed to a defoliant. In variable 10a, the "do not knows" were grouped with the

participants who indicated they had not been exposed. In variable 10b, the "do not knows" were treated as missing data.

Means scores for the the SCL-90-R total score (PST) and the Cornell Medical Index total score for each of the three subgroups were computed and tested using the Students' T-test in relationship to the 10 personal/social characteristics. For example, in the Vietnam nurse subgroup, nurses who had prior mental health assistance had a mean total SCL-90-R score of 19.9, while those who had received no prior mental health assistance had a mean total SCL-90-R score of 11.9. The difference in the total scores for the two groups was significant at the $p < .05$ level.

Table 11 (p. 79) shows the mean total scores for the SCL-90-R and the Cornell Medical Index in relation to the personal/ social variables. Table 11 includes the three subgroups of Vietnam nurses, Vietnam nurses and medics, and the total group. Please note that the three groups are not independent but cumulative.

For six of the 10 personal/social variables there were significant differences between the two groups on the total scores of the SCL-90-R or the Cornell Medical Index. In particular, three variables, alcohol use, current symptoms, and prior mental health assistance were significant on both the SCL-90-R and Cornell Medical Index. There were

TABLE 11

RESULTS FOR PERSONAL/SOCIAL CHARACTERISTICS AND THE TOTAL SCORES ON THE CORNELL MEDICAL INDEX AND THE SCL-90-R

	SCL			CMI		
	n	Means	SD	n	Means	SD
Currently in Therapy						
Vietnam Nurses						
Yes	7	30.3	18.4	7	23.3	16.6
No	20	26.4	20.3	20	29	20.8
Missing Data	2					
Vietnam Nurses & Medics						
Yes	10	31.1	19.5	10	25.9	21.6
No	26	22.6	19.4	26	25.7	19.6
Missing Data	2					
Vietnam Nurses, Medics, & Overseas						
Yes	10	31.1	19.4	10	26	21.6
No	32	21.2	18.3	32	23	18.5
Missing Data	2					
Social Contact						
Vietnam Nurses						
Yes	20	25	19.9	20	26	19.7
No	9	29.4	19.7	9	29.7	18.6
Vietnam Nurses & Medics						
Yes	21	24.3	19.1	21	25.1	19.6
No	17	24.3	20	17	26	19.7
Vietnam Nurses, Medics, & Overseas						
Yes	27	22.3	18	27	22.1	18.2
No	17	24.3	20	17	26.1	19.6

(TABLE 11 CONTINUED NEXT PAGE)

TABLE 11 (Continued)

	SCL			CMI		
	n	Means	SD	n	Means	SD
Prior Mental Health Assistance						
Vietnam Nurses						
Yes	21	30.6	19.9*	21	32.7	19.1**
No	8	15.3	11.9	8	12.6	8.4
Vietnam Nurses & Medics						
Yes	27	29	19.9**	27	31	20.2**
No	11	12.8	11.6	11	12.5	7.4
Vietnam Nurses, Medics, & Overseas						
Yes	27	29	19.9**	27	30.9	20.2**
No	17	13.6	11.3	17	12.1	6.3
Current Symptoms						
Vietnam Nurses						
Yes	12	38.3	17.7**	12	43.2	16.4***
No	17	18	15.9	17	15.9	11.0
Vietnam Nurses & Medics						
Yes	15	37.7	18.1***	15	42.1	18.8***
No	23	15.6	14.5	23	14.7	9.8
Vietnam Nurses, Medics, & Overseas						
Yes	16	35.7	19.3***	16	40.3	19.6***
No	28	15.8	13.9	28	14.1	9.1

*p < .05
**p < .025
***p < .001

(TABLE 11 CONTINUED NEXT PAGE)

TABLE 11 (Continued)

	SCL			CMI		
	n	Means	SD	n	Means	SD
Length of Time in Service Prior to Overseas						
Vietnam Nurses						
< 6 months	6	27.2	12.3	6	24.7	12.6
> 6 months	23	26.2	20.8	23	27.8	20.7
Vietnam Nurses & Medics						
< 6 months	10	21.7	12.1	10	19.6	11.6
> 6 months	28	25.3	21.3	28	27.7	21.2
Vietnam Nurses, Medics, & Overseas						
< 6 months	11	21.4	11.5	11	19	11.2
> 6 months	33	24	20.5	33	25.2	20.4
Disability or Injury While in Service						
Vietnam Nurses						
Yes	12	32.5	23.9	12	36.9	21.7**
No	16	21.1	14.1	16	18.9	12.9
Msg Data	1					
Vietnam Nurses & Medics						
Yes	17	29.4	23.9	17	34.5	22.4**
No	20	19.3	13.4	20	17.1	12.2
Msg Data	1					
Vietnam Nurses, Medics, & Overseas						
Yes	18	29.6	23.1*	18	33.4	22.2**
No	25	17.7	12.8	25	15.9	11.2
Msg Data	1					

*p < .05
**p < .025

(TABLE 11 CONTINUED NEXT PAGE)

TABLE 11 (Continued)

	SCL			CMI		
	n	Means	SD	n	Means	SD
Total Length of Time in Service						
Vietnam Nurses						
< 48 mo.	19	21.8	16.7	19	19.7	13.7**
> 48 mo.	9	35.7	22.7	9	40.2	21.3
Msg Data	1					
Vietnam Nurses & Medics						
< 48 mo.	22	20.0	16.3	22	18.7	13.0**
> 48 mo.	15	30.1	22.6	15	33.9	23.3
Msg Data	1					
Vietnam Nurses, Medics, & Overseas						
< 48 mo.	24	20.5	15.8	24	18.3	12.5**
> 48 mo.	19	25.8	22	19	28.9	22.8
Msg Data	1					
Alcohol Use						
Vietnam Nurses						
0 or 1	21	21.9	16.8*	21	21.3	14.9**
2 or more	8	38.4	20.9	8	42.6	20.8
Vietnam Nurses & Medics						
0 or 1	29	19.1	15.5**	29	19.2	13.6***
2 or more	9	41.1	21.2	9	45.9	21.8
Vietnam Nurses, Medics, & Overseas						
0 or 1	35	18.4	14.9***	35	17.9	12.8***
2 or more	9	41.1	21.2	9	45.9	21.8

*p < .05
**p < .025
***p < .001

(TABLE 11 CONTINUED NEXT PAGE)

TABLE 11 (Continued)

	SCL			CMI		
	n	Means	SD	n	Means	SD
Exposure to Chemical Defoliant A						
Vietnam Nurses						
Yes	9	31.9	16.9	9	39.3	11.9**
No & Do Not Know	20	23.9	20.0	20	21.7	19.3
Vietnam Nurses & Medics						
Yes	11	32.5	19.7	11	40	16.8**
No & Do Not Know	27	21	18.3	27	19.7	17.3
Vietnam Nurses, Medics, & Overseas						
Yes	11	32.5	19.7	11	40	16.9***
No & Do Not Know	33	19.9	17.4	33	18.1	16
Exposure to Chemical Defoliant A						
Vietnam Nurses						
Yes	9	31.9	16.9	9	39.3	11.9
No	4	41.7	26.4	4	36.0	22.9
Vietnam Nurses & Medics						
Yes	11	32.5	19.7	11	40	16.9
No	6	32.8	24.8	6	27.2	22.5
Vietnam Nurses, Medics, & Overseas						
Yes	11	32.5	19.7	11	40	16.8
No	8	26.6	24.3	8	22	21.3

**p < .025
***p < .001

(TABLE 11 CONTINUED NEXT PAGE)

TABLE 11 (Continued)

	SCL			CMI		
	n	Means	SD	n	Means	SD
History of Trauma						
Vietnam Nurses						
No Trauma	7	27.6	21.1	7	19.1	15.4
Positive Trauma	22	26.0	19.0	22	29.7	19.7
Vietnam Nurses & Medics						
No Trauma	10	22.8	19.6	10	17.7	14.3
Positive Trauma	28	24.9	19.4	28	28.4	20.3
Vietnam Nurses, Medics, & Overseas						
No Trauma	13	20.1	18.1	13	15.8	13.1
Positive Trauma	31	24.3	18.9	31	26.9	19.8

TABLE 12

RELATIONSHIP BETWEEN THE PERSONAL/SOCIAL CHARACTERISTICS AND THE TOTAL SCORES ON THE CORNELL MEDICAL INDEX AND SCL-90-R

Personal/Social Characteristics	SCL-90-R	CMI
Mental health assistance prior to the study	X	X
Alcohol use	X	X
Current physical symptoms	X	X
Disability or injury sustained while in the service	O	X
Length of time in service	O	X
Exposure to chemical defoliants (10a) (N = 44)	O	X
Currently in therapy	O	O
Social contact	O	O
Length of time in service prior to overseas	O	O
History of trauma	O	O

X = $p < .05$

O = $p > .05$

significant differences between groups on the Cornell Medical Index for three of the variables, disability or injury sustained while in the service, length of time in the service, and exposure to chemical defoliants. For the remaining 4 personal/social variables, there were no significant differences between groups. Table 12 (p. 85) summarizes these findings.

Participants' Written Comments on the Demographic Questionnaire

Respondents were invited to share additional thoughts they had about their Vietnam experience on the demographic form. (These comments are included in Appendix D.) Many of the responses were concerned with their reactions to their service experiences. Their comments were classified into three categories by this researcher.

a. Negative aspects of the service experience

b. Positive aspects of the service experience

c. Participant's concerns with the study.

The major negative aspects reported were statements of anger and distrust for authority. Examples included: "The thing that bugged me the most was the lack of honesty of the U.S. Army"; "We should not have been there, in my opinion"; "Stupid war." Concern for their own safety and exposure to the injured also were prominent in their

comments. Further examples included fear of being "shot down, crash, or being hit by a rocket where I lived in Da Nang"; "many young maimed boys every day"; "the experience was tough but I put a box around that time and don't think about it often;" and "My Vietnam experience/stressors were not casualty related but exposure to events of the war."

Examples of comments that reflect positive experiences included: "There were rewarding times and the camaraderie was super! . . . The nursing was great. . . . I was one of the lucky ones . . . my nurse friends and I are still in touch by mail and phone."

A further review of the comments indicates that the nurses who served in the overseas areas reported more positive comments than did the nurses who were in Vietnam.

Further comments provided suggestions for the study. One participant was concerned that the questionnaire did not include abuse of prescription medications, since prescription medications were easily obtained by nurses in Vietnam. Another participant pointed out that the questions were worded towards nurses and not all health care providers were nurses.

Summary of Results

The hypotheses that intrusiveness and avoidance of a traumatic event correlate significantly with health status as measured by physical and psychological symptoms were supported. Partial support was found for a positive relationship between personal/social variables and the total scores for the Cornell Medical Index and SCL-90-R. The three personal/social characteristics that were found to be significant for the Cornell Medical Index and the SCL-90-R were alcohol use, prior mental health assistance, and current symptoms.

CHAPTER 5

DISCUSSION

The purpose of this study was to describe the relationship between the measures of intrusiveness and avoidance and physical and psychological health for those who served as health care providers during the Vietnam war. Relationships among the demographic variables and physical and psychological health variables were explored. The study employed a convenience sample of 44 nurses and medics who responded to a request for subjects advertised in nursing and veteran journals and places of employment. This chapter is organized into six sections. Each section is used to discuss a particular topic. The first and second sections address the results of the study related to the two research questions. The third section discusses the subjects' scores on the Cornell Medical Index and the SCL-90-R and their relationship to standardized normal populations. Methodological issues, the significance of the study to mental health nursing, and recommendations for further study are covered in the remaining three sections.

Discussion of Question 1

The first research question addressed the relationship between the subscales measuring intrude and avoid on the Impact of Events Scale and the health measures on the Cornell Medical Index and the SCL-90-R. In the present study, a positive correlation was found for both the intrude and avoid subscales with all subscales of the SCL-90-R, indicating a consistent and positive association between intrusive thoughts and avoidance behaviors and current health status. Since there was a strong positive correlation (r = .79) between the intrude/avoid subscales of the I.E.S., this relationship will be discussed before the relationship between intrusive thoughts, avoidant behaviors, and health status is discussed.

The theory of cognitive processing of a traumatic event conceptualizes continued intrusive thoughts or attempts to avoid stimuli that evoke memories of the event. The model describes these two phenomena as interactive. The intrude/avoid interactive phase continues until the individual has reframed the event to fit with his inner model and reality. In this study a correlation of .78 was found between the subscales avoid and intrude. A strong correlation like this could mean that the two subscales measure the same concept. In reviewing the Impact of Event

Subscales item by item, it seems clear that the subscales do differentiate between the two concepts. In an earlier study by Horowitz, Wilner, Kaltreider, and Alvarez (1980), the correlation between the subscales was considerably less (r = .49) and this lower correlation suggests that the two concepts, although related, are not the same. In this study, a total of 11 participants answered 0 on all questions for both the intrude and the avoid subscale. The zero responses inflated the strength of the correlation between the two subscales.

The findings appear to support the conceptual framework of the study. The consistent positive association with the intrude/avoid subscales and all the subscales of the SCL-90-R lends support to a relationship between intrusive thoughts and avoidance behaviors and psychological health status. Even though all the subscales are positively and significantly correlated with avoid/intrude, they are not correlated at such a high level that they would measure the same concepts (range = .35 to .68). The same pattern of positive correlations occurs with the Cornell Medical Index subscales and the intrude/avoid subscales.

A study by Wilson and Krauss (1986) supports the relationship between the incidence of intrusive thoughts and an increase in physical symptoms. They utilized Horowitz's cognitive processing modes of a traumatic

experience to address the relationship between premorbid personality disorder, combat roles, exposure to stressors in Vietnam, homecoming, and severity of PTSD among Vietnam combat veterans. Physical symptoms was one category of the PTSD measure used. The stressor variable "injury/death" correlated significantly with intrusive imagery. They found that the best predictor of physical symptoms on the PTSD scale in the combat veteran is the stressor variable "injury/death". The definition of "injury/death" variable is similar to the nurses' descriptions of dealing with casualties in a wartime situation. The findings of the current study fit with the findings of Wilson and Krauss (1986). In the current study, both subscales of the IES were positively and significantly correlated with both of the subscales on the CMI.

The results of the present study differ from the study by Horowitz, Wilner, Kaltreider, and Alvarez (1980). Horowitz et al. found that the intrude subscale correlated significantly with only the anxiety subscale of the SCL-90-R, while the avoid subscale correlated positively and significantly with every subscale of the SCL-90-R. Horowitz utilized a study sample that had experienced a traumatic event 25 weeks prior to the study. His data supported the premise that traumatic events tend to precipitate anxiety reactions.

There are several factors that may have influenced the difference in the results for this study. Society provides ways in which to deal with trauma for normal life events. Horowitz's study samples may have utilized those societal supports for normal life events, whereas societal supports may not have been present for the returning healthcare veteran. Second, the length of time since the event was different for the two study samples. Horowitz's participants experienced the event an average of 25 weeks prior to the study. And finally, the Horowitz sample was obtained in a clinical setting while the participants in this study had to be solicited through posters and mailings. This difference may have affected the results.

Discussion of Question 2

This research question studied the relationship of the personal/social variables and health status variables as measured on the SCL-90-R and the Cornell Medical Index. Of the variables studied, a significant relationship was found for prior mental health assistance, alcohol use and current symptoms, and total scores on SCL-90-R and Cornell Medical Index. To find these three variables related to health status is not surprising.

Prior mental health assistance refers to those persons who have sought some form of professional help

since their return from overseas. This relationship was supported by a prior study by Schnaier (1982). She found that one-third of her sample experienced mental distress and 48.3% of the sample had sought prior mental health assistance. Sixty-one percent of participants in this study indicated that their symptoms were troublesome enough to seek professional care. It is important to note two facts. First, there was were large number of participants who were in therapy prior to the study. This may be a reflection of the sampling technique utilized for the study. Secondly, therapy may have allowed the participants to be cognizant of physical and psychological symptoms rather than utilizing denial as a means to cope.

This study shows a significant difference between the group which uses alcohol and those with less alcohol use and physical and psychological symptom measures. This relationship is also not surprising. The relationship between intrusiveness and avoidance, increased physical and psychological symptoms, and alcohol use is a complex phenomenon. Alcohol or substance use may be a coping behavior to control the intrusive thoughts and use of alcohol can increase physical symptoms.

Data regarding physical symptoms was gathered in two places in the study. The variable "current symptoms" was a measure within the demographic form. To find a significant

relationship between the current symptoms questioned in the demographic form and the standardized tools is what one would expect.

Three personal/social characteristics that were significant for only the Cornell Medical Index were disability or injury sustained while in the service, length of time in the service, and exposure to chemical defoliants. Physical health measures (Cornell Medical Index) and not mental health measures (SCL-90-R) would logically relate to these variables. Exposure to chemical defoliants and sustaining an injury are related to physical symptoms. The longer one is in the service the greater chance of disability and greater chance for chemical exposure.

For the Cornell Medical Index and the SCL-90-R there was no difference in scores for the groups in relation to length of time in service, social contact with other veterans, status of therapy, or history of trauma. Length of time in the service before going overseas was not significantly related to physical symptoms in this study. This finding may be due to the small number of subjects who served less than 6 months prior to their overseas duty. Paul and O'Neil (1984) reported a negative relationship between the length of time in service prior to going overseas and the number of physical symptoms reported by

the nurses. In this study the number of subjects who were in the armed forces less than 6 months before going overseas was small. Social contact and history of trauma are variables in which the length of time since the experience is important. Participants may have developed a network of social support that includes persons other than veterans. Numerous traumas may have happened. Those currently in therapy are not differentiated by physical symptoms or psychological symptoms as measured by the total scores on the two tools. Those currently in therapy again are more than 10 years from the experience and may focus on other therapeutic issues such as marital discord, anxiety, depression.

Standardized Populations and the Cornell Medical Index and the SCL-90-R

Results on the SCL-90-R for the female Vietnam nurses were compared to nonpatient female standardized scores. Five of the 9 subscales were found to be significantly different from the norm group. The five subscales were interpersonal sensitivity, depression, anxiety, hostility, and positive symptoms total. Stroud's (1980) findings indicated that Vietnam nurses scored higher on the interpersonal sensitivity scale than nonveteran nurses but a significant difference was not reached. Higher scores on

the interpersonal sensitivity subscale, depression subscale, and anxiety subscale would indicate that the Vietnam nurses perceived themselves as less secure in social setting, more easily hurt emotionally, and more disliked or misunderstood by others. They experienced some depressive symptoms, which included hopelessness. They also experienced anxiety symptoms such as nervousness and feeling fearful or suddenly scared. The scores of the Vietnam nurses were not compared to outpatient standardized scores. Therefore, we can see that these Vietnam nurses were different from the standardized nonpatient population but there is no information on an outpatient, non-Vietnam experience, female nurse population. Nine Vietnam nurse veterans had indicated that they were currently in therapy at the time of the study.

Results on the Cornell Medical Index cannot be generalized to a standardized normal population. One of the limitations of the Cornell Medical Index is that normative data is not available at this time (Seymour, 1976). Abrahamson, Terespolsky, Brook, and Kark (1965) caution that the Cornell Medical Index should not be used as the sole evidence of group differences in health. Lawton (1959) believes that the Cornell Medical Index is "especially valuable when one must select emotionally disturbed persons from a population which includes many

average people" (p. 352). Best discrimination criteria for the Cornell Medical Index are provided by the total score greater than 30 and the M-R score greater than 10. The M-R score critical score level of 10 or above has been found to yield the minimum amount of misclassification of normal persons and psychiatric patients of both sexes. The lower cutting point (i.e., three is used in the manual to suspect a medical emotional disturbance) is more sensitive as an index of milder degrees of emotional disturbance (Abrahamson, 1966, p. 291). Using the criteria of M-R greater than 10 and the total score greater than 30, 10 participants in this study fell within these parameters. The findings suggest that 10 of the 44 participants may have a medically significant emotional disturbance. Ten of the participants are currently in therapy and the Cornell Medical Index may be sensitive to their responses.

Methodological Limitations of the Study

The limitations inherent in this study fall into three categories: weaknesses in the tools, sampling techniques, and time-lapse since the experience. In this study, the Impact of Event Scale did not discriminate between the two variables intrusiveness and avoidance. Both are believed to play a role in the processing of traumatic events.

The Impact of Event Scale will not identify subjects who use massive denial or repression to deal with their Vietnam experience. The avoid subscale measures reported episodes of conscious awareness of the traumatic event. Denial as a coping mechanism protects the ego from conscious awareness. Those aware of processing the event have both intrusive and avoidant behaviors. The person in denial may express the internal conflict in a somatic form or may deny somatic complaints. Therefore, low scores on the avoid subscale and the somatic subscale may reflect a person who is using denial as well as a true lack of the attributes in the subject.

Physical complaints and psychological affective states were assessed in this study. Depue and Monroe (1986) caution against psychological and physical symptoms checklists that are loaded with negative affect items such as anxiety, irritability, anger, and depression, whereas they suggest that general indicators of emotional disturbance, such as life dissatisfaction and lack of positive well-being, be incorporated into measurements. They suggest that stable attributes of an individual are equal or more powerful than socioenvironmental factors in predicting human disorder. Individual differences such as life-altering medical disorders, physical handicaps, personality dimensions, and coping styles are variables

that need to be incorporated in life-stress research (Depue & Monroe, 1986, p. 48).

Sampling techniques are a limitation from several perspectives. Because advertisements were sent to nursing organizations and hospitals, the poster may have targeted only those active in nursing. Seventy-five percent of the Vietnam nurses and 67% of the total sample were employed as nurses at the time of the study. Nurses who may have left nursing since their Vietnam service may have been underrepresented in this sample.

Convenience sampling was the method employed to obtain the participants of the study. Those who chose to participate were willing to acknowledge that they were in Vietnam. Denial of the Vietnam experience and wish to forget about the experience may have kept others from replying.

The respondents for this study had educational levels beyond those reported in other studies. This may be a result of the sampling procedure. The educational levels of the participants included more than 30% with a Master's Degree or a Ph.D. Similar findings of advanced education among female veterans were reported by Boyle (1985).

The final methodological limitation is the time since the event factor. Respondents were asked to recall information that they experienced 10 to 15 years prior.

Much may have happened during that time that may not be attributed to the Vietnam experience (e.g., further traumatic events, lifestyle, and therapy).

Significance to Mental Health Nursing

The ability to identify and assess individual difficulties and to institute effective intervention is the cornerstone to advanced practice of psychiatric mental health nursing. The study identified three areas for the practitioner to assess while working with the Vietnam healthcare provider. These three areas are physical symptoms, alcohol use, and the intrusive/ avoidance behaviors. The study found a relationship between continued intrusive thoughts and avoidance behaviors and health status. Physical symptoms can be an expression of working through unresolved emotional distress. Physical symptoms may fluctuate and may be the only channel available to express the emotion. Therefore, it is important to explore the significance of physical symptoms.

The practitioner working with Vietnam veterans who were health care providers in the Vietnam war needs to obtain an alcohol and chemical substance use history. In this study, nurses' comments suggested that alcohol and drug use may be a hidden factor among the healthcare

veteran. Research studies designed to include alcohol and drug problems are indicated.

Nurses who served in Vietnam have lived with the notion that their war experiences were something to be forgotten as soon as possible. The practitioner needs to be aware of the strengths that the nurses exhibited during their Vietnam experiences. These strengths can be mobilized to assist nurses in their personal and professional lives.

Recommendations for Further Study

1. The role of alcohol and substance use in the integration of a traumatic experience needs further study.

2. The factors that caused the war nursing experience to be growth producing for some and disabling for others is an area worthy of further study.

3. Studies that incorporate a control group or use a longitudinal design will further our knowledge of effects on healthcare providers.

4. Further study is warranted on personnel not addressed in this study. Physicians, nurses stationed in evacuation hospitals outside Vietnam, and nurses who may have left nursing, have not been adequately represented in studies.

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APPENDICES

APPENDIX A

PACKET SENT TO PARTICIPANTS

THE OREGON HEALTH SCIENCES UNIVERSITY
3181 S.W. Sam Jackson Park Road Portland, Oregon 97201

Dear Vietnam Healthcare Provider:

I appreciate your volunteering to participate in my study. The post-war effects of participation in the war are only now becoming understood. Healthcare military personnel have only recently gained recognition that they also served in the combat zone and that their role was an important and stressful one.

Often, other veterans have reported that after filling out a questionnaire that requires a recall of memories that may have been unpleasant, they discover questions and thoughts about their experiences that they would like to discuss. Therefore, I am enclosing a list of Vet Centers that you may wish to contact.

Participation in the study is entirely voluntary. I appreciate your cooperation and speedy reply. After signing the CONSENT FORM, return it with the completed questionnaires in the self-addressed pre-stamped envelope. Feel free to contact me at (503) 245-9587 if you have any questions.

Sincerely,

[redacted]

Graduate Student
Oregon Health Science University

THE OREGON HEALTH SCIENCES UNIVERSITY

3181 S.W. Sam Jackson Park Road Portland, Oregon 97201

CONSENT FORM

I am being asked to participate in a study entitled, "The Current Health Status of United States Healthcare Providers During the Vietnam War", being conducted by Janet Nickolaus R.N., B.S.N. The aim of the study is to explore present physical health status and emotional integration of the Vietnam experience for those involved as healthcare providers during the Vietnam War.

I understand that my participation will be confidental. I cannot be identified by name, address, social security to any record system of the Oregon Health Science University or outside institution. No names will be provided by use of a coding system.

I understand that I will receive no personal benefit or renumeration from participation in this study. However, by serving as a participant, I will contribute to new knowledge that may assist health professionals in the future in the area of health promotion.

I understand that I am free to withdraw my participation in the study at any time without affecting my relationship with the Oregon Health Science University.

This research project is under supervision of Charlotte Markel R. N,, M.S.N. If there are any questions call Janet Nickolaus, in care of Charlotte Markel at (503) 225-7827.

I have read the foregoing and agree to participate in this study.

_____ _____

Participant Date

CODE #_____ Code _____ (1-3)

DEMOGRAPHIC DATA
(To be kept confidential)

Date of birth:_____ DOB_____ (4-5)
(month/day/year)

Male_____ Female_____ Sex_____ (6-7)

DIRECTIONS: Circle or write in the answer(s) to question which most describes you. The column at the right is for coding purposes only.

1) Age range while serving in Vietnam or overseas:
A. 18-20 C. 25-29 E. 35-39
B. 20-24 D. 30-35 F. 40-50
V/age_____ (8)

2) Predominant race or ethnicity:
A. American Indian or Alaskan Native D. Caucasian/White
B. Asian or Pacific Islander E. Hispanic/Spanish
C Black F. Other
Race_____ (9)

3) Marital status while serving in Vietnam/overseas:
A. never married C. separated E. widowed
B. married D. divorced
Mar/V_____ (10)

4) Marital status now:
A. never married C. separated E. widowed
B. married D. divorced
Mar/P_____ (11)

5) What was your basic nursing education:
A. diploma C. bachelor degree
B. associate degree D. other:_____
Edu/B_____ (12)

6) What is your present level of education:
A. as above C. Master's in:_____
B. bachelor degree in:_____ D. Phd in:_____
E. Other_____
Edu/P_____ (13)

7) Are you presently employed as a nurse:
A. Yes B. No
Emp-1_____ (14)

8)Are you presently employed:
A. full-time B. part-time C. not working
Emp-2_____ (15)

9) Present area of employment as a nurse:

A. Operating room	G. Outpatient	M. Oncology
B. Medical	H. Emergency room	N. OB/Gyn
C. Surgical	I. Recovery room	O. Orthopedic/Rehab
D. ICU	J. Geriatics	P. Nursery
E. CCU	K. Pediatrics	Q. Neuro/Neuro ICU
F. Psychiatry	L. Anesthesiology	R. Other_____

Emp-3_____ (16-17)

10) Branch of service:
A. Army C. Air Force
B. Navy D. Marines
Branch_____ (18)

10) Where were you stationed in Vietnam or overseas:
10)_____

LOC_____ (19-20)

11) Highest military rank held in Vietnam/overseas:
11)_____

Rank_____ (21)

12) Length of time on active duty and assigned to a military base, before going to Vietnam/overseas:
A. less than 6 months B. more than 6 months

A-VN/OS_____ (22)

13) Active service dates: 13. From:_____ To:_____
(month/day/year) (month/day/year)

ASD1_____ (23-28)

ASD2_____ (29-34)

14) DEROS _____

Deros_____ (35-41)

15) What type of medical facility were you assigned to:
A. "field hospital"
B. Evac hospital with 25 beds or less
C. Evac hospital with 26-50 beds
D. Evac hospital with 51-100 beds
E. Evac hospital with 101-300 beds
F. Evac hospital with 500 beds
G. "causalty staging unit"
H. other_____

Type_____ (42)

16) Have you remained in contact with people you knew in the service:
A. Yes B. No

Soccon1_____ (43)

17) If answered 'yes' to question 16, the number of persons that you remain in contact with are:
A. one C. three E. five
B. two D. four F. six or more

Soccon2_____ (44)

18) Did you suffer any disability or injuries in the service:
18. A. Yes (describe)_____
_____
B. No

Disser_____ (45)

DisserA_____ (46-47)

19) Since your return from Vietnam (or since your discharge from the service) have you experienced symptoms of: (list all that apply)
A. asthma E. cardiac problems
B. arthritis F. frequent infections
C. recurrent headaches G. sexual dysfunction
D. colitis H. other (describe)_____
_____

SYM-A_____ (48)

20) Are you having difficulty with any of the above presently:
20. A. Yes (describe)_____
_____
B. No

SYM-P_____ (49)

Sym-d_____ (50)

21) Have you experienced a spontaneous miscarriage:
A. Yes B. No C. More than one miscarriage
D. Have not been pregnant

SAB_____ (51)

22) Among your offspring are any dealing with birth defects:
A. Yes B. No C. no offspring
Describe_____

CHBD_____ (52)

23) Have you obtained professional help for mental health problems:
A. Yes B. No

Menheal_____ (53)

24) If answered 'yes' to question 23, the problem of which I sought help for was (list all that apply)
A. Depression without suicide attempt
B. Depression with suicide attempt
C. Anxiety/panic attacks
D. Marriage/relationship problems
E. Alcohol or substance problems
F. Other:_____

Menhea2_____ (54)

25) If you answered'yes' to question 23, was your Vietnam/ overseas experience discussed:
A. Yes, focused on Vietnam or time in service
B. Mentioned but did not discuss Vietnam or time in service
C. Vietnam or service experience did not apply to this problem

Menhea3_____ (55)

26) Are you currently in therapy/counseling:
A. Yes B. No

Menhea4_____ (56)

27) Circle YES or NO for the following questions:

Have you ever felt you should cut down on your drinking?	YES	NO
Have people annoyed you be criticizing your drinking?	YES	NO
Have you ever felt bad or guilty about drinking?	YES	NO
Have you ever had a drink first thing in the morning to steady your nerves or get rid of a hangover (eyeopener)	YES	NO

ETOHC_____ (57)
ETOHA_____ (58)
ETOHG_____ (59)
ETOHE_____ (60)

28) In the last 12 months have you used mood altering street drugs:
A. Yes B. No

drugs1_____ (61)

29) If "yes" to question 28, how often:
A. Daily
B. Twice a week
C. Weekly
D. Twice a month
E. Monthly
F. other_____

drug2_____ (62)

30) While in Vietnam or the military were you exposed to chemical defoiliants:
A. Yes B. No C. Do not know

chemdef_____ (63)

31) Since your return from Vietnam or overseas have you experienced:

A. Victim of rape or battering
B. serious life-threats(i.e. auto accident, armed robbery natural disaster)
C. serious, near fatal illness of a loved one
D. family trauma including the effects of alcoholism, mental illness, family breakup
E. Death of a significant other

trauma_____ (64)

32) In the space provided list the hospitals you were assigned to during your military service (between 1965-1975):

HOSPITAL AND LOCATION	PRIMARY DUTIES	DATES OF SERVICE

Locser_____ (65)

33) I would like to receive an abstract of the finished study:
A. Yes B. No

Abstrac_____ (66)

COMMENTS:

IMPACT OF EVENT SCALE (VIETNAM)

Below is a list of comments made by people after stressful events, like serving in Vietnam. Please circle each number, indicating how frequently these comments were true for you DURING THE PAST SEVEN DAYS. If they did not occur during that time, please circle the 0 under the "not at all" column.

0=NOT AT ALL 1=RARELY 2=SOMETIMES 3=OFTEN

0	1	2	3	1.	I thought about it when I didn't mean to.
0	1	2	3	2.	I avoided letting myself get upset when I thought about it or was reminded of it.
0	1	2	3	3.	I tried to remove it from my memory.
0	1	2	3	4.	I had trouble falling asleep or staying asleep.
0	1	2	3	5.	I had waves of strong feelings about it.
0	1	2	3	6.	I had dreams about it.
0	1	2	3	7.	I stayed away from reminders of it.
0	1	2	3	8.	I felt as if it hadn't happen or it wasn't real.
0	1	2	3	9.	I tried not to talk about it.
0	1	2	3	10.	Other things kept making me think about it.
0	1	2	3	11.	Pictures about it popped into my head.
0	1	2	3	12.	I was aware that I still had a lot of feelings about it, but I didn't deal with them.
0	1	2	3	13.	I tried not to think about it.
0	1	2	3	14.	Any reminder brought back feelings about it.

The mean scores of each item are based on a 5 point scale where 0 = not experienced, 1 = rarely experienced, 3 = sometimes experienced, and 5 = often experienced during the week. The intrusion subset of questions are 1, 4, 5, 6, 10, 11, 14; avoidance subset questions = 2, 3, 7, 8, 9, 12, 13, 15 (Horowitz, 1986, p. 30).

SCL—90—R

INSTRUCTIONS.

Below is a list of problems and complaints that people sometimes have. Please read each one carefully. After you have done so, please fill in one of the numbered circles to the right that best describes HOW MUCH DISCOMFORT THAT PROBLEM HAS CAUSED YOU DURING THE PAST WEEK INCLUDING TODAY. Mark only one numbered circle for each problem and do not skip any items. If you change your mind, erase your first mark carefully. Read the example below before beginning, and if you have any questions please ask the technician.

SEX

MALE ○

FEMALE ○

NAME: _____

LOCATION: _____

EDUCATION: _____

MARITAL STATUS: MAR.__ SEP.__ DIV.__ WID.__ SING.__

DATE			ID. NUMBER	AGE
MO	DAY	YEAR		

VISIT NUMBER: _____

EXAMPLE

HOW MUCH WERE YOU DISTRESSED BY:	NOT AT ALL	A LITTLE BIT	MODERATELY	QUITE A BIT	EXTREMELY
1. Bodyaches	0	1	2	●	4

HOW MUCH WERE YOU DISTRESSED BY:		NOT AT ALL	A LITTLE BIT	MODERATELY	QUITE A BIT	EXTREMELY
1.	Headaches	1	0	1	2	3	4
2.	Nervousness or shakiness inside	2	0	1	2	3	4
3.	Repeated unpleasant thoughts that won't leave your mind	3	0	1	2	3	4
4.	Faintness or dizziness	4	0	1	2	3	4
5.	Loss of sexual interest or pleasure	5	0	1	2	3	4
6.	Feeling critical of others	6	0	1	2	3	4
7.	The idea that someone else can control your thoughts	7	0	1	2	3	4
8.	Feeling others are to blame for most of your troubles	8	0	1	2	3	4
9.	Trouble remembering things	9	0	1	2	3	4
10.	Worried about sloppiness or carelessness	10	0	1	2	3	4
11.	Feeling easily annoyed or irritated	11	0	1	2	3	4
12.	Pains in heart or chest	12	0	1	2	3	4
13.	Feeling afraid in open spaces or on the streets	13	0	1	2	3	4
14.	Feeling low in energy or slowed down	14	0	1	2	3	4
15.	Thoughts of ending your life	15	0	1	2	3	4
16.	Hearing voices that other people do not hear	16	0	1	2	3	4
17.	Trembling	17	0	1	2	3	4
18.	Feeling that most people cannot be trusted	18	0	1	2	3	4
19.	Poor appetite	19	0	1	2	3	4
20.	Crying easily	20	0	1	2	3	4
21.	Feeling shy or uneasy with the opposite sex	21	0	1	2	3	4
22.	Feelings of being trapped or caught	22	0	1	2	3	4
23.	Suddenly scared for no reason	23	0	1	2	3	4
24.	Temper outbursts that you could not control	24	0	1	2	3	4
25.	Feeling afraid to go out of your house alone	25	0	1	2	3	4
26.	Blaming yourself for things	26	0	1	2	3	4
27.	Pains in lower back	27	0	1	2	3	4
28.	Feeling blocked in getting things done	28	0	1	2	3	4
29.	Feeling lonely	29	0	1	2	3	4
30.	Feeling blue	30	0	1	2	3	4
31.	Worrying too much about things	31	0	1	2	3	4
32.	Feeling no interest in things	32	0	1	2	3	4
33.	Feeling fearful	33	0	1	2	3	4
34.	Your feelings being easily hurt	34	0	1	2	3	4
35.	Other people being aware of your private thoughts	35	0	1	2	3	4

Please continue on the following page ▶

SCL—90—R

SIDE 2

HOW MUCH WERE YOU DISTRESSED BY:		NOT AT ALL	A LITTLE BIT	MODERATELY	QUITE A BIT	EXTREMELY
36. Feeling others do not understand you or are unsympathetic	36	0	1	2	3	4
37. Feeling that people are unfriendly or dislike you	37	0	1	2	3	4
38. Having to do things very slowly to insure correctness	38	0	1	2	3	4
39. Heart pounding or racing	39	0	1	2	3	4
40. Nausea or upset stomach	40	0	1	2	3	4
41. Feeling inferior to others	41	0	1	2	3	4
42. Soreness of your muscles	42	0	1	2	3	4
43. Feeling that you are watched or talked about by others	43	0	1	2	3	4
44. Trouble falling asleep	44	0	1	2	3	4
45. Having to check and double-check what you do	45	0	1	2	3	4
46. Difficulty making decisions	46	0	1	2	3	4
47. Feeling afraid to travel on buses, subways, or trains	47	0	1	2	3	4
48. Trouble getting your breath	48	0	1	2	3	4
49. Hot or cold spells	49	0	1	2	3	4
50. Having to avoid certain things, places, or activities because they frighten you	50	0	1	2	3	4
51. Your mind going blank	51	0	1	2	3	4
52. Numbness or tingling in parts of your body	52	0	1	2	3	4
53. A lump in your throat	53	0	1	2	3	4
54. Feeling hopeless about the future	54	0	1	2	3	4
55. Trouble concentrating	55	0	1	2	3	4
56. Feeling weak in parts of your body	56	0	1	2	3	4
57. Feeling tense or keyed up	57	0	1	2	3	4
58. Heavy feelings in your arms or legs	58	0	1	2	3	4
59. Thoughts of death or dying	59	0	1	2	3	4
60. Overeating	60	0	1	2	3	4
61. Feeling uneasy when people are watching or talking about you	61	0	1	2	3	4
62. Having thoughts that are not your own	62	0	1	2	3	4
63. Having urges to beat, injure, or harm someone	63	0	1	2	3	4
64. Awakening in the early morning	64	0	1	2	3	4
65. Having to repeat the same actions such as touching, counting, or washing	65	0	1	2	3	4
66. Sleep that is restless or disturbed	66	0	1	2	3	4
67. Having urges to break or smash things	67	0	1	2	3	4
68. Having ideas or beliefs that others do not share	68	0	1	2	3	4
69. Feeling very self-conscious with others	69	0	1	2	3	4
70. Feeling uneasy in crowds, such as shopping or at a movie	70	0	1	2	3	4
71. Feeling everything is an effort	71	0	1	2	3	4
72. Spells of terror or panic	72	0	1	2	3	4
73. Feeling uncomfortable about eating or drinking in public	73	0	1	2	3	4
74. Getting into frequent arguments	74	0	1	2	3	4
75. Feeling nervous when you are left alone	75	0	1	2	3	4
76. Others not giving you proper credit for your achievements	76	0	1	2	3	4
77. Feeling lonely even when you are with people	77	0	1	2	3	4
78. Feeling so restless you couldn't sit still	78	0	1	2	3	4
79. Feelings of worthlessness	79	0	1	2	3	4
80. The feeling that something bad is going to happen to you	80	0	1	2	3	4
81. Shouting or throwing things	81	0	1	2	3	4
82. Feeling afraid you will faint in public	82	0	1	2	3	4
83. Feeling that people will take advantage of you if you let them	83	0	1	2	3	4
84. Having thoughts about sex that bother you a lot	84	0	1	2	3	4
85. The idea that you should be punished for your sins	85	0	1	2	3	4
86. Thoughts and images of a frightening nature	86	0	1	2	3	4
87. The idea that something serious is wrong with you body	87	0	1	2	3	4
88. Never feeling close to another person	88	0	1	2	3	4
89. Feelings of guilt	89	0	1	2	3	4
90. The idea that something is wrong with your mind	90	0	1	2	3	4

(EN)

History Number_____

CORNELL MEDICAL INDEX

HEALTH QUESTIONNAIRE

e_____

nt
ır
ne_____

Your
Home
Address_____

v Old Are You?_____ Circle If You Are . . Single, Married, Widowed, Separated, Divorced.

:le the Highest
r You Reached
ichool

1 2 3 4 5 6 7 8	1 2 3 4	1 2 3 4
Elementary School	High	College

What Is Your Occupation? _____

Directions: This questionnaire is for ***MEN ONLY.***
If you can answer **YES** to the question asked, put a circle around the (Yes)
If you have to answer **NO** to the question asked, put a circle around the (No)
Answer all questions. If you are not sure, guess.

you need glasses to read?	Yes	No	001
you need glasses to see things at a dis-ance?	Yes	No	002
s your eyesight often blacked out com-letely?	Yes	No	003
your eyes continually blink or water?	Yes	No	004
you often have bad pains in your eyes?	Yes	No	005
e your eyes often red or inflamed?	Yes	No	006
e you hard of hearing?	Yes	No	007
ve you ever had a bad running ear?	Yes	No	008
you have constant noises in your ears?	Yes	No	009
you have to clear your throat frequently?	Yes	No	010
you often feel a choking lump in your hroat?	Yes	No	011
e you often troubled with bad spells of neezing?	Yes	No	012
your nose continually stuffed up?	Yes	No	013
you suffer from a constantly running ose?	Yes	No	014
ve you at times had bad nose bleeds?	Yes	No	015
you often catch severe colds?	Yes	No	016
you frequently suffer from heavy chest olds?	Yes	No	017
en you catch a cold, do you always have o go to bed?	Yes	No	018
frequent colds keep you miserable all inter?	Yes	No	019
Do you get hay fever?	Yes	No	020
Do you suffer from asthma?	Yes	No	021
Are you troubled by constant coughing?	Yes	No	022
Have you ever coughed up blood?	Yes	No	023
Do you sometimes have severe soaking sweats at night?	Yes	No	024
Have you ever had a chronic chest condition?	Yes	No	025
Have you ever had T.B. (Tuberculosis)?	Yes	No	026
Did you ever live with anyone who had T.B.?	Yes	No	027

C

Has a doctor ever said your blood pressure was too *high?*	Yes	No	028
Has a doctor ever said your blood pressure was too *low?*	Yes	No	029
Do you have pains in the heart or chest?	Yes	No	030
Are you often bothered by thumping of the heart?	Yes	No	031
Does your heart often race like mad?	Yes	No	032
Do you often have difficulty in breathing?	Yes	No	033
Do you get out of breath long before anyone else?	Yes	No	034
Do you sometimes get out of breath just sitting still?	Yes	No	035
Are your ankles often badly swollen?	Yes	No	036
Do cold hands or feet trouble you even in hot weather?	Yes	No	037
Do you suffer from frequent cramps in your legs?	Yes	No	038
Has a doctor ever said you had heart trouble?	Yes	No	039
Does heart trouble run in your family?	Yes	No	040

OPEN TO NEXT PAGE

Cornell University Medical College
1300 York Avenue, New York, N. Y. 10021

D

Have you lost more than half your teeth?	Yes	No	041
Are you troubled by bleeding gums?	Yes	No	042
Have you often had severe toothaches?	Yes	No	043
Is your tongue usually badly coated?	Yes	No	044
Is your appetite always poor?	Yes	No	045
Do you usually eat sweets or other food between meals?	Yes	No	046
Do you always gulp your food in a hurry?	Yes	No	047
Do you often suffer from an upset stomach?	Yes	No	048
Do you usually feel bloated after eating?	Yes	No	049
Do you usually belch a lot after eating?	Yes	No	050
Are you often sick to your stomach?	Yes	No	051
Do you suffer from indigestion?	Yes	No	052
Do severe pains in the stomach often double you up?	Yes	No	053
Do you suffer from constant stomach trouble?	Yes	No	054
Does stomach trouble run in your family?	Yes	No	055
Has a doctor ever said you had stomach ulcers?	Yes	No	056
Do you suffer from frequent loose bowel movements?	Yes	No	057
Have you ever had severe bloody diarrhea?	Yes	No	058
Were you ever troubled with intestinal worms?	Yes	No	059
Do you constantly suffer from bad constipation?	Yes	No	060
Have you ever had piles (rectal hemorrhoids)?	Yes	No	061
Have you ever had jaundice (yellow eyes and skin)?	Yes	No	062
Have you ever had serious liver or gall bladder trouble?	Yes	No	063

J

Are your joints often painfully swollen?	Yes	No	064
Do your muscles and joints constantly feel stiff?	Yes	No	065
Do you usually have severe pains in the arms or legs?	Yes	No	066
Are you crippled with severe rheumatism (arthritis)?	Yes	No	067
Does rheumatism (arthritis) run in your family?	Yes	No	068
Do weak or painful feet make your life miserable?	Yes	No	069
Do pains in the back make it hard for you to keep up with your work?	Yes	No	070
Are you troubled with a serious bodily disability or deformity?	Yes	No	071

F

Is your skin very sensitive or tender?	Yes	No	072
Do cuts in your skin usually stay open a long time?	Yes	No	073
Does your face often get badly flushed?	Yes	No	074
Do you sweat a great deal even in cold weather?	Yes	No	075
Are you often bothered by severe itching?	Yes	No	076
Does your skin often break out in a rash?	Yes	No	077
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Do you suffer badly from frequent severe headaches?	Yes	No	079
Does pressure or pain in the head often make life miserable?	Yes	No	080
Are headaches common in your family?	Yes	No	081
Do you have hot or cold spells?	Yes	No	082
Do you often have spells of severe dizziness?	Yes	No	083
Do you frequently feel faint?	Yes	No	084
Have you fainted more than twice in your life?	Yes	No	085
Do you have constant numbness or tingling in any part of your body?	Yes	No	086
Was any part of your body ever paralyzed?	Yes	No	087
Were you ever knocked unconscious?	Yes	No	088
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Are you a sleep walker?	Yes	No	094
Are you a bed wetter?	Yes	No	095
Were you a bed wetter between the ages of 8 and 14?	Yes	No	096

GO TO NEXT PAGE

H

Have you ever had anything seriously wrong with your genitals (privates)?	Yes	No	097
Are your genitals often painful or sore?	Yes	No	098
Have you ever had treatment for your genitals?	Yes	No	099
Has a doctor ever said you had a hernia (rupture)?	Yes	No	100
Have you ever passed blood while urinating (passing water)?	Yes	No	101
Do you have trouble starting your stream when urinating?	Yes	No	102
Do you have to get up every night and urinate?	Yes	No	103
During the day, do you usually have to urinate frequently?	Yes	No	104
Do you often have severe burning pain when you urinate?	Yes	No	105
Do you sometimes lose control of your bladder?	Yes	No	106
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Are you frequently confined to bed by illness?	Yes	No	116
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Did you ever have scarlet fever?	Yes	No	124
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Were you ever treated for severe anemia (thin blood)?	Yes	No	127
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Do you have diabetes (sugar disease)?	Yes	No	129
Did a doctor ever say you had a goiter (in your neck)?	Yes	No	130
Did a doctor ever treat you for tumor or cancer?	Yes	No	131
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strange people or places make you afraid?	Yes	No	151
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you usually feel unhappy and depressed?	Yes	No	158
you often cry?	Yes	No	159
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es life look entirely hopeless?	Yes	No	161
you often wish you were dead and away from it all?	Yes	No	162
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d anyone in your family ever have a nervous breakdown?	Yes	No	169
Were you ever a patient in a *mental* hospital (for your nerves)?	Yes	No	170
Was anyone in your family ever a patient in a *mental* hospital (for their nerves)?	Yes	No	171

P

Are you extremely shy or sensitive?	Yes	No	172
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Are you considered a touchy person?	Yes	No	176
Do people usually misunderstand you?	Yes	No	177

Q

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Do you go to pieces if you don't constantly control yourself?	Yes	No	181
Do little annoyances get on your nerves and make you angry?	Yes	No	182
Does it make you angry to have anyone tell you what to do?	Yes	No	183
Do people often annoy and irritate you?	Yes	No	184
Do you flare up in anger if you can't have what you want right away?	Yes	No	185
Do you often get into a violent rage?	Yes	No	186

R

Do you often shake or tremble?	Yes	No	187
Are you constantly keyed up and jittery?	Yes	No	188
Do sudden noises make you jump or shake badly?	Yes	No	189
Do you tremble or feel weak whenever someone shouts at you?	Yes	No	190
Do you become scared at sudden movements or noises at night?	Yes	No	191
Are you often awakened out of your sleep by frightening dreams?	Yes	No	192
Do frightening thoughts keep coming back in your mind?	Yes	No	193
Do you often become suddenly scared for no good reason?	Yes	No	194
Do you often break out in a cold sweat?	Yes	No	195

History Number_____

WOMEN)

ate_____

CORNELL MEDICAL INDEX

HEALTH QUESTIONNAIRE

rint
our
ame_____

Your Home Address_____

w Old Are You?_____ Circle If You Are . . Single, Married, Widowed, Separated, Divorced.

rcle the Highest ar You Reached School

1 2 3 4 5 6 7 8 Elementary School | 1 2 3 4 High | 1 2 3 4 College

What Is Your Occupation?_____

Directions: This questionnaire is for ***WOMEN ONLY.***
If you can answer **YES** to the question asked, put a circle around the (Yes)
If you have to answer **NO** to the question asked, put a circle around the (No)
Answer all questions. If you are not sure, guess.

lo you need glasses to read?	Yes	No	001
lo you need glasses to see things at a distance?	Yes	No	002
as your eyesight often blacked out completely?	Yes	No	003
o your eyes continually blink or water?	Yes	No	004
o you often have bad pains in your eyes?	Yes	No	005
re your eyes often red or inflamed?	Yes	No	006
re you hard of hearing?	Yes	No	007
ave you ever had a bad running ear?	Yes	No	008
o you have constant noises in your ears?	Yes	No	009
o you have to clear your throat frequently?	Yes	No	010
o you often feel a choking lump in your throat?	Yes	No	011
re you often troubled with bad spells of sneezing?	Yes	No	012
your nose continually stuffed up?	Yes	No	013
you suffer from a constantly running nose?	Yes	No	014
ave you at times had bad nose bleeds?	Yes	No	015
you often catch severe colds?	Yes	No	016
you frequently suffer from heavy chest colds?	Yes	No	017
hen you catch a cold, do you always have to go to bed?	Yes	No	018
frequent colds keep you miserable all winter?	Yes	No	019
Do you get hay fever?	Yes	No	020
Do you suffer from asthma?	Yes	No	021
Are you troubled by constant coughing?	Yes	No	022
Have you ever coughed up blood?	Yes	No	023
Do you sometimes have severe soaking sweats at night?	Yes	No	024
Have you ever had a chronic chest condition?	Yes	No	025
Have you ever had T.B. (Tuberculosis)?	Yes	No	026
Did you ever live with anyone who had T.B.?	Yes	No	027

C

Has a doctor ever said your blood pressure was too *high?*	Yes	No	028
Has a doctor ever said your blood pressure was too *low?*	Yes	No	029
Do you have pains in the heart or chest?	Yes	No	030
Are you often bothered by thumping of the heart?	Yes	No	031
Does your heart often race like mad?	Yes	No	032
Do you often have difficulty in breathing?	Yes	No	033
Do you get out of breath long before anyone else?	Yes	No	034
Do you sometimes get out of breath just sitting still?	Yes	No	035
Are your ankles often badly swollen?	Yes	No	036
Do cold hands or feet trouble you even in hot weather?	Yes	No	037
Do you suffer from frequent cramps in your legs?	Yes	No	038
Has a doctor ever said you had heart trouble?	Yes	No	039
Does heart trouble run in your family?	Yes	No	040

OPEN TO NEXT PAGE

Cornell University Medical College
1300 York Avenue, New York, N. Y. 10021

)

Have you lost more than half your teeth?	Yes	No	041
Are you troubled by bleeding gums?	Yes	No	042
Have you often had severe toothaches?	Yes	No	043
Is your tongue usually badly coated?	Yes	No	044
Is your appetite always poor?	Yes	No	045
Do you usually eat sweets or other food between meals?	Yes	No	046
Do you always gulp your food in a hurry?	Yes	No	047
Do you often suffer from an upset stomach?	Yes	No	048
Do you usually feel bloated after eating?	Yes	No	049
Do you usually belch a lot after eating?	Yes	No	050
Are you often sick to your stomach?	Yes	No	051
Do you suffer from indigestion?	Yes	No	052
Do severe pains in the stomach often double you up?	Yes	No	053
Do you suffer from constant stomach trouble?	Yes	No	054
Does stomach trouble run in your family?	Yes	No	055
Has a doctor ever said you had stomach ulcers?	Yes	No	056
Do you suffer from frequent loose bowel movements?	Yes	No	057
Have you ever had severe bloody diarrhea?	Yes	No	058
Were you ever troubled with intestinal worms?	Yes	No	059
Do you constantly suffer from bad constipation?	Yes	No	060
Have you ever had piles (rectal hemorrhoids)?	Yes	No	061
Have you ever had jaundice (yellow eyes and skin)?	Yes	No	062
Have you ever had serious liver or gall bladder trouble?	Yes	No	063
Are your joints often painfully swollen?	Yes	No	064
Are your muscles and joints constantly feel stiff?	Yes	No	065
Do you usually have severe pains in the arms or legs?	Yes	No	066
Are you crippled with severe rheumatism (arthritis)?	Yes	No	067
Does rheumatism (arthritis) run in your family?	Yes	No	068
Do weak or painful feet make your life miserable?	Yes	No	069
Do pains in the back make it hard for you to keep up with your work?	Yes	No	070
Are you troubled with a serious bodily disability or deformity?	Yes	No	071

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GO TO NEXT PAGE

H

Have your menstrual periods usually been painful?	Yes	No	097
Have you often felt weak or sick with your periods?	Yes	No	098
Have you often had to lie down when your periods came on?	Yes	No	099
Have you usually been tense or jumpy with your periods?	Yes	No	100
Have you ever had constant severe hot flashes and sweats?	Yes	No	101
Have you often been troubled with a vaginal discharge?	Yes	No	102
Do you have to get up every night and urinate?	Yes	No	103
During the day, do you usually have to urinate frequently?	Yes	No	104
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APPENDIX B

POSTER ADVERTISEMENT FOR STUDY

Were you a nurse

- in Vietnam during the war?
- who worked with Vietnam casualties in Japan, Guam, the Philippines or Thailand?

Military nursing personnel have only recently gained recognition that they also served and that their role was an important and stressful one.

WANTED:

Former Vietnam Healthcare Professionals

* to participate in a descriptive study of the stresses of working in a combat zone or with wartime casualties

* to respond by way of a questionnaire how you have integrated your experience and any of its manifestations today

For more information contact:

Vietnam Veteran Healthcare Professionals
c/o J. Nickolaus, R.N.
Oregon Health Sciences University
P.O. Box 19702
Portland, OR 97219

Upon completion an abstract of the study will be sent to all participants.

APPENDIX C

CORRESPONDENCE FOR THESIS

Major Mary Frank

Jennifer Schnaier

VIETNAM VETERANS OF AMERICA
329 EIGHTH STREET NE, WASHINGTON, DC 20002 ★ 202/546·3700

October 24, 1983

Ms. Janet Nickolaus
6550 SW 63rd Ave
Portland, OR 97221

Dear Ms. Nickolaus:

I have enclosed the copy of my thesis that you requested. I hope you find it useful. If you have any questions or comments about it once you have had a chance to read it over, please let me know.

Good luck on your thesis - I know what a tremendous task it is.

Sincerely,

[redacted]

Jenny Schnaier
9115 Springhill Lane #202
Greenbelt, MD 20770

DEPARTMENT OF THE ARMY
THE CHIEF OF MILITARY HISTORY AND THE CENTER OF
MILITARY HISTORY
WASHINGTON, DC 20314

REPLY TO
ATTENTION OF DAMH-HDS 19 December 1984

SUBJECT: Request for Information on "Vietnam nurses".

Janet Marie Nickolaus
Graduate Student
Oregon Health Science University
Psychiatric Mental Health Nursing
3181 S.W. Sam Jackson Park Road
Portland, Oregon 97201

Dear Ms. Nickolaus,

Your 15 October 1984 letter to COL Lemmon has made the rounds of the various branches at this Center. The Organizational History Branch has provided a response to your question on the M.A.S.H. and M.U.S.T. hospitals. From there it was inappropaitely referred to the Research and Analysis Branch and re-referred to me. My apologies for the delay in replying. I have spent the majority of the month away at meetings and have been consumed by reports since returning.

The phraseology of your questions/statements presents some dilemmas in answering them. You state you are pursuing a graduate research study on "Vietnam nurses" and are interested in "in-country" and those "who worked in the receiving hospitals." You may need to clarify those terms. The former leads me to believe you are interested in nurses who served in Vietnam while the latter expands the study to include most Vietnam-era military nurses as well. It is also unclear whether you are pursuing a tri-service study or focusing on the Army Nurse Corps (ANC). As the Army Nurse Corps Historian my comments are Army specific.

Specific question response:

(1) What is the difference between a "MUSH" unit and a MASH unit? See incl 1 prepared by S. Harding, Organizational History Branch. Please forgive the typing. Re-typing would have further delayed the response.

(2) Where were the receiving hospitals out of country? The phrase "receiving hospital" is imprecise. I assume you are asking for the evacuation routes. Evacuation was a tr-service responsibility. It is most succintly discussed by Neel (incl 2).

(3) Which hospitals in the states received the wounded? All CONUS (continental United States) military hospitals received patients from Vietnam. The intent was to place the patient in the hospital closest to his family that could provide the specialized care he needed. Some hospitals were noted for their specialties. Examples are the amputation rehabilitation program offered at Fitzsimons Army Medical Center in Denver and the burn center at Brooke Army Medical Center, Fort Sam Houston, Tx.

(4) What and where were the bases of operation for the nurses? The phrase "bases of operation" does not generally apply to Army nurses. Air Force flight nurses are assigned to a home base but serve on any given day wherever the aircraft is located, hence a base of operation. Army nurses are assigned to specific units and only occasionally perform temporary duty (TDY) elsewhere. ANCs were assigned at all hospitals in Vietnam (see incl 3). Males nurses were assigned to organic combat units as well. Male nurse anesthetists served with the 173d Airborne Brigade, the 101st Airborne Division and the 1st Cavalry Division (Airmobile). The gender division has to do with the combat exclusion policy for females. In addition, we were assigned at CONUS and OCONUS (outside CONUS) facilities. Incl 4 lists the representative commands for June 1968, the month our strength in Vietnam peaked at 906. Due to the opening and closing of facilities in response to demands, a list of all places ANCs were stationed would require a fairly exhaustive review of the station lists for each month of the 10 year period.

(5) When did the first male nurses arrive in Vietnam? Not known. While we keep statistics on the percentage of the Corps that is male, virtually no other statistic is gender-specific.

(6). When did the first female nurses arrive in Vietnam? The first Army nurses (who happened to be female) to arrive in Vietname were MAJ Frances K. Smith, MAJ Helen D. Smith and MAJ Jane Becker. They were placed on temporary duty assignment with the US Military Assistance Advisory Group (Vietnam), Saigon on 29 Apr 1956. Their mission was to train South Vietnamese nurses in nursing care procedures and techniques and to provide patient care to other assigned MAAG personnel. Thirteen nurses (not necessarily all female) were included on the staff of the 8th Field Hospital which arrived in Nha Trang in March 1962.

(7) What were the staffing patterns for the nurses? The phrase "staffing patterns" is imprecise. Are you asking for the number of nurses/specialty/hospital, the number per ward/shift or the hours worked? The numbers of staff authorized by type of facility is available in published Tables of Organization and Equipment (TO&Es) while the numbers actually assigned/hospital/month is available in the monthly Nursing Service Activities Reports. The documents are available at this Center and are open to outside researchers. As no official history is published, the analysis is the responsibility of the individual researcher. The hours worked obviously fluctuated in response to demands.

(8) In World War II was there a shortage of the more advanced technological supplies such as antibiotics, blood supplies or specialized equipment? Again, a generalization would require analysis of primary source documents. The history The Medical Department: Medical Service in the Mediterranean and Minor Theaters is published (see incl 5 pg 18) but the histories of the European Theater of Operations (ETO) and the Southwest Pacific Area (SWPA) are still in progress. Also, it is essential to remember that penicillin did not receive wide clinical use until 1943 and that other antibiotics (vs. sulfonamides) were not yet discovered.

(9) In the Korean War did they experience shortages? The above statement again applies. The official history is still in progress.

Based on the global nature of your questions I would suggest you do more extensive background reading. One source is Spurgeon Neel's Vietnam Studies Medical Support 1965-1970 (see incl 6). You may also need to avail yourself of a military medical library. Ideally you would come to this Center to research our Vietnam records which include Nursing Service Activities Reports, End-of-tour interviews, etc, and to the National Archives and Records Service for the World War II and Korean holdings. Recognizing that time and expense are both usually deterrants, you might contact the medical library at Madigan Army Medical Center, Takoma, WA to see if they have copies of the annual Report of The Surgeon General, US Army. These reports were not issued from 1942-1958, but are available for the Vietnam years and are very helpful. If they are available there it would be worth the two+ hour drive to Takoma. Because of time constraints and the bulk of the materials I am not able to xerox any of these sources for you.

I hope I have been of some assistance. Best of luck with your research and happy holidays.

[redacted]

Mary E.V. Frank, RN, MSN, MA
MAJOR US Army Nurse Corps
Army Nurse Corps Historian

Incl 6

Reply to MASH/MUST section of letter from Janet M. Nickolaus.

The primary difference between MASH (Mobile Army Surgical Hospital) units and MUST (Medical Unit, Self-contained, Transportable) units in Vietnam was one of intent. The MASH concept had evolved during World War II and the Korean War as a way to provide resusitative surgery and medical treatment necessary to stabilize critically injured or ill patients received from battalion and divisional elements for onward evacuation to rear-area hospitals. As the designation impies, MASH hospitals in World War II and Korea moved with the front. However, the fluid nature of the Vietnam War, and the resultant lack of a "front line" in the traditional sense, meant that mobile hospitals tended to quickly evolve into fixed-base installations that provided follow-on surgery and prolonged treatment rather than simply preparing patients for onward evacuation.

The evolution of the MUST concept was thus an attempt to put the "Mobile" back into mobile hospitals by creating well-equipped, easily transportable surgical hospitals that were intended to provide only that care necessary to allow the onward evacuation of critically injured or ill troops. In order to insure that these new MUST hospitals were indeed easily transportable the Army built them around a combination of portable, expandable metal core units supplemented by air-inflatable fabric ward units. The entire hospital compound could be broken down and moved, by either aircraft or truck, within 24 hours. These MUST hospitals were provided with a wider range of trauma-oriented equipment than were the MASH hospitals and were intended to provide a slightly different type of care. However, in all other respects the two organizations were virtually identical.

The first MUST-organized medical unit deployed to Vietnam was the 45th Surgical Hospital, which arrived in-country in

(1)

October 1966 and was fully operational by mid-November. A second MUST unit, the 22d Surgical Hospital, arrived in Vietnam during December 1967. In addition to these two units, several MASH units received MUST-related equipment and were thereafter considered "hybrid" MUST-MASH organizations. The MASH units which received the MUST equipment were the 2d Surgical Hospital (recieved MUST equipment in January 1969), the 3d Surgical Hospital (May 1967), and the 18th Surgical Hospital (November 1967).

The original rationale for the introduction of MUST units to Vietnam, the creation of a highly mobile care facility that would move with the battalion and division sized units it was to serve, soon gave way to the realities of the Vietnam War. MUST units quickly became almost as permanently fixed in one location as the MASH units they had been intended to supplant, and rarely made use of their mobility. This was not necessarily a drawback, however, for the widespread use of medical evacuation (MEDEVAC) helicopters made it possible to ferry wounded and ill troops from the battle area directly to the MASH or MUST hospital, thus fulfilling the spirit of each organization's stated mission without requiring the units to actually move.

As mentioned earlier, the primary differences between MASH and MUST units resulted from the varying intended uses. The typical Mobile Army Surgical Hospital in Vietnam was a 60 bed facility staffed by some 27 medical officers and 75 enlisted personnel. The MUST unit, on the other hand, was intended as a 20 bed facility, and had a correspondingly reduced staff. However, in practice in Vietnam both types of organizations undertook essentially the same sorts of missions and tended to have generally the same patient treatment capabilities and personnel staffing levels. The enclosed excerpts from the volume Medical Support, 1965-1970, from the series VIETNAM STUDIES (U.S. Army Center of Military History, Washington, DC), and from Shelby L. Stanton's Vietnam Order of Battle (U.S. News

(2)

Books: Washington, DC, 1981) provide additional details on both the MASH and MUST units deployed to Vietnam.

S. HARDING 1 NOV 84

(3)

APPENDIX D

COMMENTS ON THE DEMOGRAPHIC FORM

COMMENTS ON THE DEMOGRAPHIC FORM

Vietnam Nurses' Comments

I am surprised you have no question re:meds that are so easy to obtain. I was addicted to prescription amphetamines in Nam and after. Also, believe many nurses take valium, xanax, sleepers, etc.

Not all healthcare providers are nurses as these questions are assuming.

I am trying to contact as many nurses as possible who served over there. I am a CRNA who has had to give up my profession because of PTSD. I hold a Master's in clinical psychology and work with stress disorder.

I don't remember dates--it took 3 years to do it all--a fast life full of fun and sorrow.

I was professionally and emotionally immature when I went to Nam. The experience was tough but I put a box around that time and don't think about it often. The thing that bugged me was the lack of honesty of the U.S. Army with the troops there (inaccurate body counts--ours in

I felt more stress at Clark C.S.F. (casualty) since it was a very busy unit with many young maimed boys every day. While flying air evac in Vietnam, I was only taking care of the patients for maximum of about 45 minutes. Vietnam stress came with wondering if we would be shot down, crash, or rocket would hit where I lived at Da Nang.

Could I come to Portland for diagnosis and treatment of service connected medical problems? Treatment by the Veteran's Administration and military when I returned home was and is poor. Psychological as well as physical aspects are given little or no consideration.

I think I will never be totally away from it and I don't want to be totally away from it, but I do want to have my year in perspective. I has a "lot" more problems prior to counseling.

It took me 3 weeks to realize that we should not be in Vietnam, having our people all shot up.

Somewhere about the middle of my tour, our fellows were training the Vietnamese to fight. Then as "in-coming" would come, those same Vietnamese soldiers would run away, leaving our guys to fight.

We nurses spent much off duty time with the outcast

Vietnamese children. They had been sent down from the northern South Vietnam border due to danger and were "living" on the shore of the South China Sea and Da Nang with nothing more than perhaps a pair of pants. We got them clothes and got other squadrons to help build some shelter and put in a water line from the neighboring leprosy village (also outcasts).

From a nursing standpoint, the nursing was great. We were able to do things without someone yelling "lawsuit" all the time. The nursing was so rewarding, yet you felt so handicapped that you could not do more for them with all their wounds and amputations, etc. The patients were so appreciative for even the simplest of things, yet the worst injured or the most incapacitated didn't want you to take time with them, but they'd say "Don't spend time with me, go help that guy over there." You'd look over and the guy he motioned to was not half as badly injured. They didn't want the care for themselves, but for their buddies.

Though we should not have been there in Vietnam in my opinion, since we were we needed to make the most of the situation. Christmas was a good time spiritually because there was little materialistic things and we did so much emotionally for the guys. There certainly was nothing commercial about it. Just being with friends. Christmas

Eve we all went in a cattle truck and sang carols to the guys guarding the perimeters.

Being in the 22nd CSF in Da Nang was not as bad as being in the rice patties for weeks or being in an Army hospital right in the line of fire--it was a better environment. It was very sad at times and we were very angry/bitter for our guys having to be there. But there were rewarding times and the camaraderie was super!

Comments from Medics

I think my duties at Brook Hospital for a year prior to Vietnam was a major stressor. I still think about patients I worked with as part of my training in the burn unit, neuro ward, med/surg, psych, etc. My Vietnam experience/stressors were not casualty related but exposure to events of the war. Thailand again was more of milieu of S.E. Asia. . . . My concerns over buddies that died, family members injured, and reaction of U.S. society to vets are also important to my personal residual feelings concerning Nam.

Entire year spent in emergency room, which was also main "triage" or "staging" area for mass casualties . . . not all healthcare providers are nurses, as these questions are assuming.

I was an Army combat medic in Vietnam assigned to the 101st Airborne Division. We were a roving battalion on loan to other divisions as needed. I spent 8 months in the field and 3 with the battalion aid station. . . .
I consider myself to have been very fortunate, experiencing limited combat during that time and limited effects afterwards. For a time I did have an "obsession" of a sort with helicopters and could not concentrate when one flew over, got nervous and even upset if one stayed around too long. I did find myself gobbling my food, had some digestive problems, nightmares, and night sweats for sometime afterwards. Now am seldom bothered by these.

I recognize that these questions tend to be directed to nursing personnel stationed with hospital facilities more than actual field medicine such as I, as a corpsman, experienced. My time in country (Vietnam) was spent with various units of the X Marine Division. My total service time was divided neatly into three areas: (1) approximately 18 months stateside hospitals; (2) almost 1 year in Vietnam; and (3) 18 months in hospital for multiple injuries. Although I have always stayed in my chosen field, certain problems, illness, and disease have forced my unnatural "retirement." I do hope my contribution to this study is of some use.

Overseas Nurses

I traveled on leave in Southeast Asia during Guam tour. Guam was sterilization center for traumatic orthopedics (amputations) where the normal stay was 10 days for surgery (debridement/antibiotics) . . . no combat experience. . . . I am a Ready Reservist with 19½ years service--feel that experience is part of a successful integration. I still associate with veterans, am married to one.

Study too long, too complex . . . wording of questions seemed skewed.

Although we worked many hard, sometimes stressful hours and most of us did time "in-country," the mere fact of returning to the continental U.S. at frequent intervals was a life saver.

Became RN after service--primary duties in USAF was emergency room. Nursing duties included establishing jail setting healthcare program, establishing county detox center, assistant head nurse alcohol rehab program, and industrial RN, which includes toxic substance safety director. . . . Sometimes I wonder if I am mildly obsessive/compulsive . . . raised strict Catholic.

APPENDIX E

MEAN, STANDARD DEVIATION, AND RANGE FOR VARIABLES IN THE CORNELL MEDICAL INDEX, IMPACT OF EVENTS SCALE, AND SCL-90-R

TABLE 13

MEAN, STD, AND RANGE FOR VARIABLES IN CORNELL MEDICAL INDEX, IES, AND SCL-90-R FOR ALL THREE GROUPS NOT OVERLAPPING

Cornell Medical Index

(N = 44)

	COSS	OBC	Moods & Feelings	Total
Mean	12.7	4.4	6.81	23.6
STD	10	4.0	7.0	18.7
Range	3-47	0-15	0-25	5-74

Impact of Events Scale

(N = 42)

	Intrude	Avoid	IES Tot
Mean	10.9	8.2	19.3
STD	11.3	9.5	19.8
Range	0-35	0-35	0-70

(TABLE 13 CONTINUED NEXT PAGE)

TABLE 13 (CONTINUED)

	Symptoms Checklist (N = 44)								
	Somat	Ob/Con	Interse	Depr	Anxi	Host	Phoax	Parid	PST
Mean	.36	.45	.52	.57	.32	.32	.17	.33	23
STD	.47	.57	.51	.55	.42	.36	.33	.51	18.8
Range	0-2.41	0-2.3	0-2	0-2.3	0-1.7	1.33	0-1.14	0-1.67	0-65

APPENDIX F

CHARACTERISTICS OF THE TOTAL SAMPLE

TABLE 14

CHARACTERISTICS OF TOTAL SAMPLE WHILE OVERSEAS

(N = 44)

CHARACTERISTIC	NUMBER	PERCENT
Sex		
Male	12	27.3
Female	32	72.7
Age (years, while overseas)		
18-20	6	13.6
20-24	25	56.8
25-29	7	15.9
30-34	2	4.5
35-39	3	6.8
40-45	1	2.3
Race		
Black	2	4.5
Caucasian	39	88.6
Hispanic	2	4.5
Other	1	2.3
Marital Status		
Never Married	38	86.4
Married	4	9.1
Divorced	2	4.5
Branch		
Army	30	68.2
Navy	3	6.8
Air Force	11	25.0
Time in Service Prior to Overseas		
Less than 6 months	11	25.0
More than 6 months	33	75.0

(TABLE 14 CONTINUED NEXT PAGE)

TABLE 14 (Continued)

CHARACTERISTIC	NUMBER	PERCENT
Rank		
E4	6	13.6
E5	4	9.1
First Lieutenant	21	47.7
Captain	10	22.7
Other	3	6.8
DEROS (date of expected return from overseas)		
1967	2	4.5
1968	13	29.5
1969	8	18.2
1970	16	36.4
1971	4	9.1
1972	1	2.3
Location in the Service		
Vietnam	38	86.4
Overseas (flew into Vietnam)	3	6.8
Overseas	3	6.8
Type of Facility		
Field Hospital	5	11.4
Evac Hospital, 26-50 beds	3	6.8
Evac Hospital, 51-100 beds	3	6.8
Evac Hospital, 101-301 beds	13	29.5
Casualty Staging Unit	4	9.1
Air Evac	3	6.8
Dispensary	1	2.3
Platoon-Aid Station	3	6.8
More Than 1 Answer	7	15.9
Other	2	4.6

TABLE 15

CURRENT CHARACTERISTICS OF TOTAL SAMPLE

(N = 44)

CHARACTERISTIC		NUMBER	PERCENT
Age			
Range	35-64		
Mean	40.5		
S.D.	4.45		
Median	39.9		
Marital Status			
Never Married		7	15.9
Married		23	52.3
Separated		3	6.8
Divorced		10	22.7
Monogamous Relationship		1	2.3
Education			
Army Medical Course		2	4.5
Diploma		9	20.4
A.A.		4	9.0
Baccalaureate		15	34.0
Master's Degree		13	29.5
Ph.D.		1	2.2
Discipline of Educational Degree			
Nursing		24	55.8*
Psychology		4	9.3
Healthcare Field		7	16.3
Other		8	18.6
No Answer		1	Missing
Employed Presently As a Nurse			
Yes		29	65.9
No		15	34.1

* = Cumulative Frequency

(TABLE 15 CONTINUED NEXT PAGE)

TABLE 15 (Continued)

CHARACTERISTIC	NUMBER	PERCENT
Present Employment		
Surgical	2	5.4
ICU	1	2.7
Psychiatry	3	8.1
Outpatient	1	2.7
ER	3	8.1
Recovery Room	1	2.7
OB-GYN	1	2.7
Other	17	45.9
More Than One Answer	4	10.8
Not Applicable	4	10.8
No Answer	7	Missing

APPENDIX G

POST-TRAUMATIC STRESS DISORDER (DSM III)

Diagnostic Criteria for Post-Traumatic Stress Disorder

A. Existence of a recognizable stressor that would evoke significant symptoms of distress in almost everyone.

B. Reexperiencing of the trauma as evidenced by at least one of the following:

   (1) recurrent and intrusive recollections of the event

   (2) recurrent dreams of the event

   (3) sudden acting or feeling as if the traumatic event were recurring, because of an association with an environmental or ideational stimulus

C. Numbing of responsiveness to or reduced involvement with the external world, beginning sometime after the trauma, as shown by at least one of the following:

   (1) markedly diminished interest in one or more significant activities

   (2) feeling of detachment or estrangement from others

   (3) constricted affect

D. At least two of the following symptoms that were not present before the trauma:

   (1) hyperalertness or exaggerated startle response

   (2) sleep disturbance

   (3) guilt about surviving when others have not, or about behavior required for survival

   (4) memory impairment or trouble concentrating

   (5) avoidance of activities that arouse recollection of the traumatic event

   (6) intensification of symptoms by exposure to events that symbolize or resemble the traumatic event

APPENDIX H

TRIPHASIC EMOTIONAL/BEHAVIORAL PROCESS OBSERVED IN VETERANS TREATED PSYCHOTHERAPEUTICALLY FOR POST-TRAUMATIC STRESS DISORDER

Triphasic Emotional/Behavioral Process Observed in Veterans Treated Psychotherapeutically for PTSD

I. Presenting emotions and behaviors:

- A. Alternation of "psychic numbing" with "intrusive-repetitive" experiences
- B. Coping emotions and strategies:
  1. Avoidance/denial ("I have no problems"); projection ("I have no problems except *you/them/it* . . ."); social isolation; workaholism; "self-medication" (drug/ETOH use to numb pain); intellectualization; depressive rumination
  2. Anger—problems with authority, distrust, cynicism; episodic violence or self-destructive behavior
  3. Guilt—self-blaming rumination; suicide attempts
  4. Anxiety—sleep disturbances, phobic reactions (i.e., avoidance of situations that remind veteran of traumatic event)

II. "Underlying" (subsequently expressed) emotions and behaviors:

- A. Rage—at those "responsible"; at the vets' own powerlessness; at the "senseless waste"; at those who "didn't go"; at those who rejected them on their return from the war
- B. Terror—of death or dismemberment
- C. Guilt—survivor guilt ("Why did I survive when those close to me died"); moral guilt about the perpetration or witnessing of acts of brutality

III. "Healing" emotions and behaviors:

- A. Reemergence of prosocial behavior and affiliative emotions—group camaraderie, recall of closeness with Viet Nam buddies
- B. Increased report of feelings of self-worth, pride, patriotism, and of courageous and humane acts in Viet Nam.
- C. Redirection of anger toward constructive ends
- D. Grieving—reliving traumatic episodes with full expression of grief; saying good-bye to dead buddies, etc.; forgiveness of oneself and others

(Newman, J. B., 1984, 130)

APPENDIX I

SCL-90-R: RAW DATA FOR THE SUBGROUPS

(N=44)

TABLE 16

SCL-90-R: RAW DATA FOR THE SUBGROUPS

(N=44)

VIETNAM NURSES

(N=29)

SOM	0.33	0.16	0.33	2.41	0.16	0.08	0
OC	0	1.5	0.9	2.3	0.4	0.1	0.6
IS	0.33	1.22	1.11	1.11	1.22	0.55	0.33
DEP	0.38	0.61	1.07	1.84	0.69	0.38	0.46
ANX	0.5	1.2	0.3	1.7	0.4	0	0.5
HOS	0.33	1.16	0.16	0.66	0.33	0	0.5
PHOB	0	0.14	0	0.14	0	0.14	0
PAR	0	0	0.5	0.83	0	0	0.16
PST	21	38	31	65	24	16	25

SOM	0.41	0	0.16	1.08	0	0.66	0.41
OC	0.5	0.1	0	0.6	0	2.2	0.4
IS	2	0.33	0.22	1.11	0.11	1.33	0.44
DEP	0.61	0.46	0.07	1.53	0	1.07	0.3
ANX	0.7	0.1	0	1	0	1.1	0.5
HOS	0.5	0.16	0.16	1.33	0	0.5	0.33
PHOB	1.14	0.28	0	0.57	0	0.57	0
PAR	1.66	0	0	0.83	0	0.83	0
PST	46	14	7	54	2	52	19

SOM	0.16	0.08	0.16	0.66	0	0.66	0.25
OC	0.1	0.1	0.1	0.3	0	1	0
IS	0	0.22	0.33	0.11	0.11	0.88	0.22
DEP	0.38	0.15	0.53	0.23	0.07	0.92	0.23
ANX	0.3	0	0.2	0	0.1	0.7	0
HOS	0	0.16	0.16	0.5	0	0.83	0.16
PHOB	0	0	0	0	0	1	0
PAR	0	0.16	0.5	0	0	1.66	0
PST	15	8	21	16	6	55	9

SOM	0.16	0	1.58	0.25	0.16	1.16	0.33	0
OC	0.3	0	1	0.7	0	0.3	1.9	0.1
IS	1.44	0.33	1.33	0.66	0	0.11	1.55	0.22
DEP	1.23	0.15	1.15	1.07	0	0.53	2.3	0.15
ANX	0.4	0	1	0.3	0	0.1	0.5	0
HOS	1	0	0.33	0.33	0.16	0	1.16	0.33
PHOB	0.42	0	0.14	0.14	0	0	1.14	0
PAR	1	0	1.67	0	0	0	0.66	0.17
PST	46	4	47	35	4	17	60	9

TABLE 16 (Continued)

VIETNAM MEDICS

(N=9)

SOM	0.08	0.25	0	0.16	0.33	0.08	0.58
OC	0.1	0.3	0	0.2	0.1	0.1	0
IS	0	0.33	0	0.22	0	0.33	0
DEP	0	0.53	0	0.61	0.3	0.07	0.15
ANX	0	0.1	0	0	0.1	0	0
HOS	0	0.5	0	0	0.33	0	0
PHOAB	0	0	0	0	0	0	0
PAR	0	0.16	0	0	0.33	0	0
PST	2	20	0	16	17	10	7

SOM	0.58	1.25
OC	0.6	1
IS	0.11	1.11
DEP	0.46	2.07
ANX	0	1.5
HOS	0	1
PHOAB	0	0.85
PAR	0.16	1.16
PST	23	63

OVERSEAS

(N=6)

SOM	0.16	0	0.08	0	0.16	0.66
OC	0.4	0	1	0.3	0	1
IS	0.11	0	0.88	0.66	0	0.88
DEP	0.23	0	1.15	0.3	0.15	0.92
ANX	0.3	0	0.4	0	0	0.7
HOS	0.16	0	0.16	0	0	0.83
PHOAB	0	0	0	0	0	< 1
PAR	0	0	0.16	0.66	0	1.66
PST	16	0	34	18	5	55

*SOM= somatization OC= obsessive-compulsive IS= interpersonal sensitivty DEP= depression ANX= anxiety HOS= hostility PHOAB= phobic anxiety PAR= paranoid ideation

APPENDIX J

IMPACT OF EVENTS SCALE: RAW DATA FOR THE SUBGROUPS

(N=42)

TABLE 17

IMPACT OF EVENTS SCALE: RAW DATA FOR THE SUBGROUPS

(N=42)

VIETNAM NURSES

(N=27)

IES1 : 3 IES2 : 3 IES3 : 2 IES4 : 2 IES5 : 3 IES6 : 0
IES7 : 3 IES8 : 3 IES9 : 3 IES10: 3 IES11: 3 IES12: 3 IES13: 2
IES14: 3

IES1 : 3 IES2 : 3 IES3 : 2 IES4 : 2 IES5 : 0 IES6 : 0
IES7 : 0 IES8 : 0 IES9 : 0 IES10: 2 IES11: 3 IES12: 2 IES13: 2
IES14: 3

IES1 : 2 IES2 : 2 IES3 : 1 IES4 : 1 IES5 : 0 IES6 : 0
IES7 : 1 IES8 : 2 IES9 : 0 IES10: 3 IES11: 1 IES12: 0 IES13: 0
IES14: 2

IES1 : 0 IES2 : 0 IES3 : 0 IES4 : 0 IES5 : 1 IES6 : 0
IES7 : 0 IES8 : 0 IES9 : 0 IES10: 2 IES11: 0 IES12: 0 IES13: 0
IES14: 2

IES1 : 0 IES2 : 0 IES3 : 0 IES4 : 0 IES5 : 0 IES6 : 0
IES7 : 0 IES8 : 0 IES9 : 0 IES10: 0 IES11: 0 IES12: 0 IES13: 0
IES14: 0

IES1 : 0 IES2 : 0 IES3 : 0 IES4 : 0 IES5 : 0 IES6 : 0
IES7 : 0 IES8 : 0 IES9 : 0 IES10: 0 IES11: 0 IES12: 0 IES13: 0
IES14: 0

IES1 : 3 IES2 : 1 IES3 : 3 IES4 : 2 IES5 : 3 IES6 : 2
IES7 : 3 IES8 : 1 IES9 : 2 IES10: 2 IES11: 3 IES12: 3 IES13: 2
IES14: 3

IES1 : 0 IES2 : 0 IES3 : 0 IES4 : 0 IES5 : 0 IES6 : 0
IES7 : 0 IES8 : 0 IES9 : 0 IES10: 0 IES11: 0 IES12: 0 IES13: 0
IES14: 0

IES1 : 2 IES2 : 3 IES3 : 1 IES4 : 2 IES5 : 3 IES6 : 0
IES7 : 1 IES8 : 0 IES9 : 0 IES10: 3 IES11: 3 IES12: 3 IES13: 0
IES14: 3

IES1 : 3 IES2 : 3 IES3 : 0 IES4 : 2 IES5 : 3 IES6 : 3
IES7 : 0 IES8 : 0 IES9 : 0 IES10: 2 IES11: 3 IES12: 0 IES13: 0
IES14: 3

TABLE 17 (Continued)

VIETNAM NURSES

	IES1 : 0	IES2 : 0	IES3 : 0	IES4 : 0	IES5 : 0	IES6 : 0
IES7 : 0	IES8 : 0	IES9 : 0	IES10: 0	IES11: 0	IES12: 0	IES13: 0
IES14: 0						
	IES1 : 0	IES2 : 0	IES3 : 0	IES4 : 0	IES5 : 0	IES6 : 0
IES7 : 0	IES8 : 0	IES9 : 0	IES10: 1	IES11: 1	IES12: 0	IES13: 9
IES14: 1						
	IES1 : 1	IES2 : 1	IES3 : 0	IES4 : 0	IES5 : 2	IES6 : 0
IES7 : 2	IES8 : 0	IES9 : 0	IES10: 2	IES11: 1	IES12: 1	IES13: 1
IES14: 1						
	IES1 : 0	IES2 : 0	IES3 : 0	IES4 : 0	IES5 : 0	IES6 : 0
IES7 : 0	IES8 : 0	IES9 : 0	IES10: 0	IES11: 0	IES12: 0	IES13: 0
IES14: 0						
	IES1 : 2	IES2 : 2	IES3 : 2	IES4 : 0	IES5 : 2	IES6 : 1
IES7 : 2	IES8 : 3	IES9 : 2	IES10: 1	IES11: 2	IES12: 2	IES13: 2
IES14: 2						
	IES1 : 2	IES2 : 3	IES3 : 0	IES4 : 3	IES5 : 2	IES6 : 0
IES7 : 0	IES8 : 0	IES9 : 0	IES10: 2	IES11: 2	IES12: 0	IES13: 0
IES14: 2						
	IES1 : 3	IES2 : 2	IES3 : 1	IES4 : 1	IES5 : 2	IES6 : 2
IES7 : 2	IES8 : 0	IES9 : 0	IES10: 2	IES11: 2	IES12: 1	IES13: 1
IES14: 2						
	IES1 : 0	IES2 : 1	IES3 : 1	IES4 : 0	IES5 : 0	IES6 : 0
IES7 : 0	IES8 : 1	IES9 : 2	IES10: 0	IES11: 0	IES12: 1	IES13: 0
IES14: 1						
	IES1 : 0	IES2 : 0	IES3 : 0	IES4 : 1	IES5 : 2	IES6 : 2
IES7 : 1	IES8 : 0	IES9 : 1	IES10: 0	IES11: 2	IES12: 2	IES13: 2
IES14: 2						
	IES1 : 3	IES2 : 3	IES3 : 3	IES4 : 3	IES5 : 3	IES6 : 3
IES7 : 3	IES8 : 0	IES9 : 2	IES10: 3	IES11: 3	IES12: 1	IES13: 3
IES14: 3						
	IES1 : 0	IES2 : 0	IES3 : 0	IES4 : 0	IES5 : 0	IES6 : 0
IES7 : 0	IES8 : 0	IES9 : 0	IES10: 2	IES11: 2	IES12: 0	IES13: 0
IES14: 2						
	IES1 : 0	IES2 : 0	IES3 : 0	IES4 : 0	IES5 : 0	IES6 : 0
IES7 : 0	IES8 : 0	IES9 : 0	IES10: 0	IES11: 0	IES12: 0	IES13: 0
IES14: 0						
	IES1 : 1	IES2 : 0	IES3 : 0	IES4 : 3	IES5 : 3	IES6 : 1
IES7 : 3	IES8 : 0	IES9 : 0	IES10: 2	IES11: 2	IES12: 3	IES13: 3
IES14: 3						

TABLE 17 (Continued)

VIETNAM NURSES

	IES1 : 3	IES2 : 3	IES3 : 3	IES4 : 3	IES5 : 3	IES6 : 3
IES7 : 3	IES8 : 3	IES9 : 3	IES10: 3	IES11: 3	IES12: 3	IES13: 3
IES14: 3						
	IES1 : 0	IES2 : 1	IES3 : 0	IES4 : 0	IES5 : 3	IES6 : 0
IES7 : 0	IES8 : 0	IES9 : 2	IES10: 0	IES11: 0	IES12: 2	IES13: 3
IES14: 1						
	IES1 : 3	IES2 : 2	IES3 : 2	IES4 : 0	IES5 : 1	IES6 : 0
IES7 : 1	IES8 : 1	IES9 : 2	IES10: 2	IES11: 2	IES12: 1	IES13: 2
IES14: 2						
	IES1 : 0	IES2 : 0	IES3 : 0	IES4 : 0	IES5 : 0	IES6 : 0
IES7 : 0	IES8 : 0	IES9 : 0	IES10: 0	IES11: 0	IES12: 0	IES13: 0
IES14: 0						
	IES1 : 3	IES2 : 3	IES3 : 3	IES4 : 3	IES5 : 3	IES6 : 2
IES7 : 3	IES8 : 0	IES9 : 0	IES10: 0	IES11: 3	IES12: 3	IES13: 3
IES14: 3						

MEDICS

	IES1 : 0	IES2 : 0	IES3 : 0	IES4 : 0	IES5 : 0	IES6 : 0
IES7 : 0	IES8 : 0	IES9 : 0	IES10: 0	IES11: 0	IES12: 0	IES13: 0
IES14: 0						
	IES1 : 0	IES2 : 0	IES3 : 0	IES4 : 1	IES5 : 0	IES6 : 0
IES7 : 0	IES8 : 0	IES9 : 0	IES10: 0	IES11: 0	IES12: 0	IES13: 0
IES14: 0						
	IES1 : 0	IES2 : 1	IES3 : 1	IES4 : 0	IES5 : 0	IES6 : 1
IES7 : 1	IES8 : 0	IES9 : 2	IES10: 1	IES11: 0	IES12: 0	IES13: 1
IES14: 0						
	IES1 : 3	IES2 : 3	IES3 : 1	IES4 : 1	IES5 : 2	IES6 : 1
IES7 : 2	IES8 : 1	IES9 : 2	IES10: 2	IES11: 2	IES12: 2	IES13: 2
IES14: 2						
	IES1 : 2	IES2 : 1	IES3 : 0	IES4 : 2	IES5 : 2	IES6 : 0
IES7 : 0	IES8 : 0	IES9 : 0	IES10: 1	IES11: 2	IES12: 2	IES13: 1
IES14: 2						
	IES1 : 0	IES2 : 0	IES3 : 0	IES4 : 0	IES5 : 0	IES6 : 0
IES7 : 0	IES8 : 0	IES9 : 0	IES10: 0	IES11: 0	IES12: 0	IES13: 0
IES14: 0						

TABLE 17 (Continued)

MEDICS

(N=9)

IES1 : 1 IES2 : 0 IES3 : 0 IES4 : 0 IES5 : 0 IES6 : 0
IES7 : 0 IES8 : 0 IES9 : 0 IES10: 0 IES11: 0 IES12: 0 IES13: 0
IES14: 0

IES1 : 1 IES2 : 1 IES3 : 2 IES4 : 1 IES5 : 1 IES6 : 1
IES7 : 1 IES8 : 2 IES9 : 2 IES10: 2 IES11: 2 IES12: 2 IES13: 2
IES14: 1

IES1 : 2 IES2 : 2 IES3 : 0 IES4 : 3 IES5 : 0 IES6 : 2
IES7 : 0 IES8 : 0 IES9 : 0 IES10: 2 IES11: 2 IES12: 1 IES13: 0
IES14: 2

OVERSEAS

(N=6)

IES1 : 1 IES2 : 2 IES3 : 1 IES4 : 0 IES5 : 1 IES6 : 1
IES7 : 1 IES8 : 1 IES9 : 1 IES10: 1 IES11: 1 IES12: 1 IES13: 1
IES14: 1

IES1 : 0 IES2 : 0 IES3 : 0 IES4 : 0 IES5 : 0 IES6 : 0
IES7 : 0 IES8 : 0 IES9 : 0 IES10: 0 IES11: 0 IES12: 0 IES13: 0
IES14: 0

IES1 : 0 IES2 : 0 IES3 : 0 IES4 : 0 IES5 : 0 IES6 : 0
IES7 : 0 IES8 : 0 IES9 : 0 IES10: 1 IES11: 0 IES12: 1 IES13: 0
IES14: 0

IES1 : 0 IES2 : 0 IES3 : 0 IES4 : 2 IES5 : 0 IES6 : 0
IES7 : 0 IES8 : 0 IES9 : 0 IES10: 0 IES11: 0 IES12: 1 IES13: 0
IES14: 1

IES1 : 0 IES2 : 0 IES3 : 0 IES4 : 0 IES5 : 0 IES6 : 0
IES7 : 0 IES8 : 0 IES9 : 0 IES10: 0 IES11: 0 IES12: 0 IES13: 0
IES14: 0

IES1 : 0 IES2 : 0 IES3 : 0 IES4 : 0 IES5 : 1 IES6 : 0
IES7 : 2 IES8 : 2 IES9 : 0 IES10: 0 IES11: 0 IES12: 0 IES13: 0
IES14: 1

APPENDIX K

CORNELL MEDICAL INDEX: RAW DATA FOR THE SUBGROUPS

(N=44)

TABLE 18

CORNELL MEDICAL INDEX: RAW DATA FOR THE SUBGROUPS*

(N=44)

VIETNAM NURSES

(N=29)

cos : 3	obc : 3	mandf: 0	total: 6
cos : 26	obc : 6	mandf: 9	total: 41
cos : 5	obc : 4	mandf: 3	total: 12
cos : 47	obc : 15	mandf: 12	total: 74
cos : 27	obc : 8	mandf: 15	total: 50
cos : 5	obc : 2	mandf: 0	total: 7
cos : 14	obc : 7	mandf: 7	total: 28
cos : 3	obc : 3	mandf: 5	total: 11
cos : 4	obc : 2	mandf: 1	total: 7
cos : 11	obc : 0	mandf: 5	total: 16
cos : 33	obc : 7	mandf: 22	total: 62
cos : 14	obc : 1	mandf: 4	total: 19
cos : 10	obc : 2	mandf: 2	total: 14
cos : 18	obc : 6	mandf: 15	total: 39
cos : 35	obc : 11	mandf: 9	total: 55
cos : 10	obc : 4	mandf: 5	total: 19
cos : 12	obc : 9	mandf: 21	total: 42
cos : 8	obc : 2	mandf: 7	total: 17
cos : 3	obc : 1	mandf: 1	total: 5

TABLE 18 (Continued)

VIETNAM NURSES

cos : 22	obc : 5	mandf: 1	total: 28
cos : 16	obc : 10	mandf: 25	total: 41
cos : 33	obc : 17	mandf: 22	total: 72
cos : 4	obc : 2	mandf: 2	total: 6
cos : 15	obc : 6	mandf: 16	total: 37
cos : 5	obc : 1	mandf: 14	total: 20
cos : 12	obc : 4	mandf: 3	total: 19
cos : 3	obc : 2	mandf: 1	total: 6
cos : 9	obc : 5	mandf: 3	total: 17
cos : 17	obc : 7	mandf: 15	total: 39

OVERSEAS

(N=6)

cos : 7	obc : 0	mandf: 8	total: 15
cos : 4	obc : 2	mandf: 0	total: 6
cos : 7	obc : 3	mandf: 3	total: 13
cos : 11	obc : 2	mandf: 3	total: 16
cos : 8	obc : 4	mandf: 0	total: 12
cos : 6	obc : 1	mandf: 0	total: 7

TABLE 18 (Continued)

MEDICS

(N=9)

cos : 13	obc : 1	mandf: 1	total: 15
cos : 5	obc : 0	mandf: 0	total: 6
cos : 6	obc : 1	mandf: 5	total: 12
cos : 18	obc : 3	mandf: 9	total: 30
cos : 6	obc : 3	mandf: 3	total: 12
cos : 33	obc : 17	mandf: 22	total: 72
cos : 9	obc : 3	mandf: 3	total: 15
cos : 4	obc : 2	mandf: 1	total: 7
cos : 10	obc : 1	mandf: 3	total: 14

*cos= complaints in organ systems obc= other body complaints
mandf= mood and feelings total= total number of complaints

AN ABSTRACT OF THE THESIS OF

JANET M. NICKOLAUS

FOR THE DEGREE

MASTERS OF NURSING

Approved: [redacted]

Charlotte Markel, R.N., M.S.N., Thesis Advisor

Title: VIETNAM NURSES AND MEDICS: A STUDY OF THEIR CURRENT HEALTH STATUS UTILIZING THE CORNELL MEDICAL INDEX, IMPACT OF EVENTS SCALE, AND THE SCL-90-R

This descriptive study focused on the relationship of intrusiveness and avoidance behaviors of a traumatic event and health status. Survey methods were employed to collect data. The questionnaires were designed to measure physical and psychological health, symptoms of distress after a traumatic event, and the current psychological impact of an event. The sampling plan employed was that of convenience sampling, in which subjects were contacted through poster advertisement. A total of 44 subjects completed the questionnaire with a return rate of 88%.

Support for the relationship between the incidence of intrusive thoughts and avoidant behaviors with physical symptoms was found. Both the intrude subscale and the avoid subscale of the Impact of Events Scale correlated positively and significantly with every subscale of the

SCL-90-R and the Cornell Medical Index. Significant positive associations were also found between the personal/social characteristics of the subjects and their alcohol use, prior mental health assistance, and current symptoms. The scores of the Vietnam nurses were significantly different from the standardized female nonpatients on five subscales of the SCL-90-R. Ten of the 44 subjects scored high enough on the Cornell Medical Index to suggest that they had a medically significant emotional disturbance. Ten of the participants were currently in therapy at the time of the study and the Cornell Medical Index may be sensitive to their responses.

The limitations inherent in this study fall into three categories: weakness in the tools, sampling techniques, and time since the event. The findings of this study can only be generalized to participants of the study.

Implications for nursing practice inferred from the study include the need for the practitioner to assess a nurse's military experience, the intrude/avoid behaviors the nurse may be experiencing, and physical symptoms. Nurses who served in Vietnam have lived with the notion tha their war experiences are something to be forgotten. The practitioner needs to be aware of the strengths that the nurses exhibited during their Vietnam experiences. The findings indicate that further study is warranted utilizing

a longitudinal or experimental design. Further study is needed on factors that caused the war experience to be growth producing for some and disabling for others.