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The treatment of post-traumatic stress disorder in Vietnam veterans : a comparison of interventions.

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THE TREATMENT OF POST-TRAUMATIC STRESS DISORDER IN VIETNAM VETERANS: A COMPARISON OF INTERVENTIONS

A Dissertation Presented

By

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DEDICATION

To My Mother Betty, and to David S. and Marty J.

For their loving support, encouragement and friendship from the very beginning; as always.

This work is also dedicated to All the Vietnam Veterans who continue to persevere in their struggle to live in "The World".

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ABSTRACT

THE TREATMENT OF POST-TRAUMATIC STRESS DISORDER IN VIETNAM VETERANS: A COMPARISON OF INTERVENTIONS

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This investigation explored the Reliving Experience of hospitalized Vietnam Veterans diagnosed with Post-Traumatic Stress Disorder. The Reliving Experience involves intrusive Vietnam imagery-related symptomatology (IRS) that becomes manifest in vivid memories, death-imagery, recurrent dreams, nightmares and flashbacks.

The goal of this investigation was to compare treatment interventions (Relaxation vs. Imagery/Desensitization) with the purpose of reducing imagery-related symptomatology in the Vietnam Veteran population. The two treatment interventions were utilized in group format. IRS and PTSD symptoms were evaluated by means of questionnaires.

It was predicted that both treatment groups would show a significant main effect for Time in the reduction of imagery-related symptomatology. A Group x Time interaction was also predicted in that the Imagery group would show a significantly greater reduction in IRS than the Relaxation group.

Analysis of the results indicated that there was little evidence to support these predictions. The study was hampered by difficulties in recruiting subjects and included only fourteen patients. Issues of mistrust were profound and perhaps contributed to the lack of significant differences between the groups.

Although methodological difficulties placed severe limitations on the potential outcome of this investigation, improvement was demonstrated for veterans' overall increased ability to relax as well as control (gain mastery) of imagery-related symptoms.

An extensive Literature Review focuses on Post-Traumatic Stress Disorder with particular emphasis on the unique characteristics of Vietnam Veterans. Also included is a thorough historical overview of Clinical Application of Imagery.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER I

LITERATURE REVIEW

General Statement: Purpose of the Study

There is currently an upsurge of interest and an abundance of literature addressing the Post Traumatic Stress Disorder (PTSD), with particular reference to the much publicized plight of the Vietnam Veteran. For many veterans with PTSD (an estimated half million), the Vietnam War has never ended (Blank, 1982). The residual effects of the war experience are manifested in a variety of affective states and behaviors symptomatic of the disorder, and more typically a sub-type of PTSD, the Delayed Chronic stress response. Although a deluge of material has been published regarding the etiology, symptomatology and general treatment approaches, little attention by comparison has been devoted to the treatment of one of the most potentially debilitating aspects of the PTS disorder--the dramatic, intense and intrusive imagery related symptomatology evidenced within the PTSD clinical picture.

This work will, therefore, address a crucial area of the PTS syndrome--the intrusive imagery related symptomatology of PTSD that becomes manifest in vivid memories, death-imagery, recurrent dreams, nightmares, and flashbacks. It is hoped that by the intervention implemented in this study, a "working-through-to-integration" process will occur and thereby alleviate the severe symptomatology as experi-

enced in these often terrorizing reliving experiences of the Vietnam War.

History

Although the classification of Post Traumatic Stress Disorder (PTSD) has only recently become acknowledged as a diagnosible disorder in the Diagnostic and Statistical Manual of Mental Disorders (DSM-III) (American Psychiatric Association, 1980). The conceptualization of trauma and traumatic syndromes is almost one hundred years old. One of Freud's most central discoveries was that specific childhood experiences crucially influenced the subsequent lives of his patients. He termed these childhood experiences "psychical traumas."

Freud defined trauma theoretically as "an experience which within a short period of time presents the mind with an increase of stimulus too powerful to be dealt with or worked off in the usual way, and this must result in permanent disturbances in the manner in which energy operates" (Strachey, 1955). Freud was interested in trauma, both in terms of its implication for psychopathology, and in terms of the theoretical underpinning of the dynamics and mechanisms in operation at the time of the trauma. In this regard, Freud explored the conditions under which specific experiences were sufficiently profound to be termed "trauma," the content of the traumatic experience, the dynamic consequences of the trauma, and ultimately, the relationship of the trauma to symptomatology. His

theoretical formations focused on the conceptualization of a "stimulus barrier" which could be overwhelmed and broken through by particularly intense stimuli (Freud, 1955). Through this breakthrough, great amounts of anxiety emerged, evidenced in dreams, nightmares, intrusive thoughts and images and an effort was made by the individual's psyche to exorcise this anxiety through abreacting in piecemeal fashion by constant repetition. It was in this tendency to repeat that Freud claimed his new principle, the Repetition Compulsion. In 1895, Freud and Breuer's work on the Hysterical Neurosis was thought to be a form of a Post-Traumatic Syndrome (Strachey, 1955). Case studies revealed the presence of two related tendencies. The first involves the "intrusion of 'warded off' ideas, or the compulsion repetition of trauma related behavior and the recurrent attacks of trauma related emotion(s)." The second tendency is seemingly contradictory but nevertheless accompanies the repetition of trauma related behavior, which has been described as a "constellation of denial, repression and emotional avoidance." Intrusive thoughts pertaining to the trauma were as evident in the waking states as was compulsion repetition in the dream states. Trauma related waves of emotional re-experiencing were manifest in both. "Denial, repression and emotional avoidance" were in operation evidenced by intense affective symptomatology with alternating periods of psychic numbing.

Combat psychiatry emerged out of a need to clinically address the issues and symptomatology that became manifest in veterans who experienced the stressors of war. Many labels have been designated

to the conditions evidenced following the war experience. Existing terms include the most current diagnosis listed in DSM III (American Psychiatric Association, 1980), as Post Traumatic Stress Disorder as well as the previous traditional classifications: shellshock, traumatic neurosis, battle fatigue, combat exhaustion, and acute combat reaction.

Although clinical observations were made from accounts of earlier wars, combat psychotherapy and the diagnosis of combat related disorders are of relatively recent origin. Prior to World War I, psychological casualties were seen as weak, cowardly and "lacking in moral fiber." Combat fatigue cases were viewed as permanently lost to the military, having no potential of returning to duty. During World War I, the possibility of treatment and return to active duty became a reality. For the first time systematic observations were made on the clinical symptomatology exhibited by soldiers experiencing psychic disintegration in combat. Speculations regarding etiology were generated, although often inaccurate. In this regard, the earliest psychopathology related to combat was believed to be an organic manifestation of artillary fire, in that brain damage was the result of air blasts of high explosives. Soldiers were diagnosed as "shellshocked" and exhibited symptoms of daze and confusion. In the early phases of the war, distinction was made between those suffering from "shellshock" (which was perceived to be physiological damage) and those diagnosed as "emotionally shocked" (which was viewed as resulting from emotional weakness and cowardliness) (Grinker, 1945). Those experiencing

"emotional shock" were inhumanly maintained toward front lines in forward medical units and were treated with painful electric shocks, threatened with internment and with execution. Those diagnosed with "shellshock" were evacuated to medical facilities. It wasn't until 1916 that the Allied Medical Services acknowledged that "shell-shocked" soldiers were suffering from a psychological disorder. The symptomatology of the "shellshocked" soldier of 60 years ago is not dissimilar to the current symptom picture of the Vietnam Veteran.

The shellshocked veteran was purported to experience one or more of the following symptoms: paralysis, pseudo-confusion, blindness, hypochondriacal phobic or anxiety symptoms, freezing, catatonic like stupor, running amok, irritability, overwhelming depression, startle reaction to noises, somatic symptoms, gross tremors, restlessness, insomnia, nightmares, and repetitive battle dreams (Brill & Beebe, 1955; Grinker & Spiegel, 1945; Menninger, 1948; Nefziger, 1970).

During the course of World War I, an abundance of literature emerged on the topic of combat stress. Chronic residual syndrome linked with combat became known as "war neuroses" or "traumatic neuroses" and were categorized as psychoneuroses (Glass, 1969). The theoretical framework used to explain the etiology of the "traumatic neurosis" was, however, strongly influenced by then prevailing psychoanalytic thought. According to Glass, the "traumatic neurosis," although precipitated by the combat experience, was the result of predisposing characterological defects (Glass, 1969). The issues

of premorbid personality type, and pre-existing military factors began to emerge in the literature as etiological underpinnings. Unfortunately, this had the effect of disqualifying the traumatic effects of battle and other traumatic experiences.

Kardiner's (1941) work on the chronic post-traumatic war neurosis following World War I was a major contribution to the field of psychiatry. Kardiner believed that the post traumatic reactions to the war were pathological syndromes that became incorporated into the personality in varying ways, resulting in different symptomatic manifestations. He identified the following as evident in the chronic phase:

I. Fixation on the trauma (an altered concept of self and the outer world).

II. Atypical dream life. (Kardiner notes that the repetitive catastrophic dream in which there is failure in carrying out successful actions, is the most "universal earmark" of the traumatic syndrome).

III. Proclivity to explosive aggressive reactions, which can be carried out in fugue states of diminished awareness or without even minimal conscious awareness.

IV. Irritability and startle reactions to auditory stimuli.

V. Contraction of the general level of functioning, including intellectual functioning. (pp. 248-249).

Kardiner related contraction of functioning to the constant struggle of fear of annilhilation. The individual's interest in the outer world begins to diminish, and he struggles with and loses his

ability to maintain meaningful contact with the world. The veteran comes to believe that the world is an overwhelmingly hostile place. Kardiner proposed that it was possible for a psychologically traumatic experience to precipitate a personality disorder, but that regardless of the features of the disorder, the characteristic symptoms of the traumatic war neurosis co-exist with, and are concurrently prevalent in the clinical picture of any other existing syndrome. Kardiner also emphasized the veteran's sensitivity toward stimuli, and viewed "irritability" in the traumatic neurosis as a direct response to auditory stimuli which evokes a startle reaction or explosive violence. Kardiner also noted that sensitivities may exist in other stimuli (smell, weather, imagery) via association to circumstances of the initial trauma. He stated that the experiencing of these phenomena was automatically recurring, much like conditioned reflex.

A proliferation of research and psychiatric categorization associated with combat stress increased dramatically with the coming of World War II. The existence of classifications of combat-related stress disorders was, perhaps, in part responsible for the high neuro-psychiatric admission rates--with the Southwestern Pacific Theater possessing the highest rates. It has been suggested that the Pacific Theater (so like Southeast Asia) was particularly stressful, not only due to geographical location where the heat was oppressive, but also because of lack of recreation, tropical diseases, isolation, monotony, and the excessive physical demands which were placed on the soldiers (Craighill, 1966).

During World War II and the Korean War, the term "combat fatigue" came to the fore, and prescribed treatment was designated by the phrase, "Immediacy, Proximity, Expectancy" (Glass, 1954). This meant that the soldier should be treated immediately after onset of symptoms, as close as possible to the location where symptoms began, and with the expectation by all parties concerned that the soldier would return to combat as quickly as possible (Glass, 1954). Treatment consisted primarily of abreactive methods such as sodium pentathol and hypnosis, which made treatment by means of catharsis and interpretation feasible.

It was Grinker and Spiegel (1945), however, who wrote the definitive work during this period in their book entitled Men Under Stress, and represented pronounced progress in the systematic evaluation of the individual's response to combat. Grinker's view of combat neurosis was that it was produced as a direct result of the difficulties of a changed personality attempting to adapt itself to normal environmental circumstances post war. Grinker cites symptoms of war neurosis as follows: "recurrent battle or trauma dreams, restlessness, irritability or lethargy, insomnia, loss of weight, anorexia, startle reaction, alcoholism, subjective anxiety and depression, abdominal pain, nausea, vomiting, aggressive and hostile behavior, paranoid reactions, mental confusion. Grinker asserts that these symptoms will persist despite time, rest or other procedures outside definitive psychiatric treatment.

Grinker classified these reactions into five categories:

I. The Passive Dependent Reactions

Here regression to infantile status is evident and the desire to be taken care of predominates.

Alcoholism may be prevalent; others defend against dependency needs by becoming caretakers.

II. The Hostile Aggressive Reactions

In this category, veterans are extremely negativistic, physically violent, non-adherent to normal standards, rules and regulations of society, lack internal controls, and are extremely dependent on external controls.

III. The Depressions

Personal loss emerges as the central theme. Overwhelming feelings of guilt and responsibility for the death of a friend or personnel in the soldier's command are experienced. The Guilty Survivor Syndrome is evidenced and underlying dynamics of the depression lie in the ambivalent feelings which occur regarding the loss.

IV. The Psychosomatic Reactions

This category typically involves psychosomatic reations of the upper gastrointestinal tract. Anorexia, nausea, vomiting, unlocalized pain in the abdomen are experienced. These symptoms occur without any physiological basis.

V. The Psychotic-like States

These states indicate a profound ego breakdown in reality testing and are typically temporary. Usually the veteran cannot differentiate between the safety of his current

environment (post war) and the uncertainty and danger experienced in the combat environment of his past.

Grinker and Spiegel emphasized that no matter how strong, normal, stable, or well adjusted a soldier might be, if the stress supercedes his individual stress tolerance or threshold, he will develop a war neurosis. Goderez (1985) takes Grinker's perspective one step further in citing the determinants of an individual's tolerance or threshold to combat stressors. These involve: (a) the soldier's initial coping capacity utilizing normal psychological defenses, i.e., denial, displacement, sublimation, etc.; (b) his physical status, i.e., deterioration due to lack of sleep, food, and rest increase the likelihood of a soldier's reaching a breaking point; and (c) the severity and duration of combat involvement with little or no "reconstituting time."

Archibald and his colleagues (1965) did extensive follow-up studies on World War II veterans. They initially collected questionnaire data 15 years post-combat and then later at 20 years post-combat in a Veterans Administration outpatient clinic. The later (20 year) follow-up study consisted of 62 World War II combat fatigue cases, 43 World War II non-combat cases, 20 World War II and 15 Korean combat veterans who did not evidence a stress syndrome, and 17 with other psychiatric diagnoses. They concluded that the combat veterans experiencing the stress syndrome significantly evidenced the continuing existence of combat nightmares, blackouts, sweaty hands or feet, startle reactions, severe headaches, irritability, and depression. The findings also stressed that symptomatology had

significantly increased over time in both World War II and Korean veterans. The combat stress group reported familial strife due to their high levels of irritability with their children and their inability to maintain employment. The two central points that Archibald and his colleagues emphasized are that first, the stress syndrome is highly persistent over long periods of time and appears to be resistant to therapeutic intervention, and second, that the severe stress syndrome evidenced by the combat veteran needs to be differentiated from less severe responses which subside with rest and removal from the stress event.

Dodds and Wilson (1960) also conducted long term follow-up studies of World War II psychiatric casualties. They compared psychophysiological responses of World War II veterans with chronic Post Traumatic Stress Disorder with a group of non-combat university students. The procedure involved exposure to eight minutes of auditory stimulation of combat sounds followed by four minutes of single light flashes from a photic stimulator. A five to seven minute baseline period of recording preceded stimulation. Subjects were monitored by electroencephalograph and recordings of pulse and respiration rate following the auditory stimulation. Findings indicated increases in pulse and respiration rate and decrease in alpha rhythm in the majority of combat veterans when exposed to the audio-visual stimuli, but not in the control group. Many of the combat veterans evidenced an almost "psychotic reaction" to the stimuli, and could not complete test exposure. Dodds and Wilson concluded that there existed a remarkable similarity between the behavioral

and physiological responses of the war neurosis and those responses produced experimentally in animals through conditioning.

In World War II, psychiatric casualities were 101 per 1000 per year and it was a period during which men were leaving the military at a faster rate than they were being drafted. With Glass's contribution of front line treatment strategies (Glass, 1954), the casualty rate dropped to 37 per 1000 per year in the Korean War. It is ironic to note that psychiatric casualties reported for Vietnam veterans is purported to be 12 per 1000 per year (not including those experiencing "delayed stress"), and holds the record for the least amount of psychiatric casualties in our war history.

The data clearly do not reflect the reality, as it is currently assessed, that there are 500,000 to 1.5 million veterans suffering from PTSD out of almost 4,000,000 men and women who served in the Vietnam War, and 1,000,000 who saw active combat (Blank, 1982). What was not apparent during the actual Vietnam War years was the severity of the symptomatology that would emerge in years to come. The symptoms of Post Traumatic Stress Disorder (delayed, chronic) have appeared to erupt up to 10-15 years subsequent to the original trauma, resulting in cognitive, affective, and behavioral disturbance.

The process of defining and diagnosing trauma and its related symptomatology has evolved over the course of twentieth century clinical history. In 1952 the first Diagnostic and Statistical Manual (DSM-I) was published and was a diagnostic resource for categorizing psychiatric casualties of World War II and the Korean

Wars. "Gross Stress Reactions" were delineated as "situations in which the individual has been exposed to severe physical demands or extreme emotional stress" (DSM-I, 1952). It was unfortunate that the revised manual, DSM-II (1968), discarded the "Gross Stress" category and replaced it with the vague category of "Transient Adjustment Reactions of Adult Life." The only reference to combat related stress in the DSM-II was the brief explanation of "Adult Adjustment Reaction," defined as "fear associated with military combat and mainfested by trembling, running, hiding" (DSM-II, 1968), which was hardly a sufficient clinical description of combat related phenomena.

Post Korean War peace-time may in part account for the reduction in emphasis of stress categorization in the revision of DSM-II, even though in the early state of DSM-II development (1964-1965), the Vietnam War was on the horizon. Until the Vietnam War erupted, the soldiers of the two World Wars and the Korean War were thought to have been assimilated into society as a whole, and combat-related stress reactions were placed on a back burner. With regard to the research and clinical findings related to the Vietnam veterans' post combat syndromes, recommendations were made by the Vietnam Veterans Working Group (VVWG) to the special DSM-III Task Force (Task Force on Nomenclature and Statistics, 1976) regarding combat-related stress disorder categories for the newest, revised edition which was to eventuate. The result was a complete and distinct categorization of trauma related disturbance entitled "Post Traumatic Stress Disorder" with subtypes "acute" (onset of symptoms occurs within a

6-month period following trauma; symptoms abate in less than 6 months), and "delayed" (onset of symptoms occurs at least 6 months subsequent to trauma), and "chronic" symptoms continue for 6 months or longer) (American Psychiatric Association, 1980).

In the stress response syndrome, there is typically a period of seeming normalcy prior to the outbreak of severe symptoms. This is often referred to as the "delayed response" evidenced in veterans subsequent to homecoming. It is important to note that during this period where no dramatic or overt symptoms appear evident, there is nevertheless active stress symptomatology present in the form of "numbing" responses indigenous to the stress response syndrome. Although atypical, it is possible that in some veterans, nightmares, repetitive dreams and other more overt symptomatology may not reach conscious levels until months or years subsequent to combat, while other, more covert symptomatology is usually in operation.

Due to the blending and overlap of symptomatology during any given time frame (according to DSM-III), the newest Diagnostic and Statistical Manual [DSM-III R (revised)] is in the process of formulation and will de-emphasize the distinctions between subtypes of acute, chronic and delayed symptomatology as relatively insignificant.

Clinical Diagnosis of the Post Traumatic Stress Disorder

A Post-Traumatic Stress Disorder is defined as "a psychologi-

cally traumatic event that is generally outside the range of usual human experience," which results in "characteristic symptoms involving re-experiencing the traumatic event, numbing of responsiveness to, or reduced involvement with the external world and a variety of autonomic, dysphoric or cognitive symptoms" (DSM-III, 1980). This definition includes experiencing traumata of the following nature: natural disasters (floods, earthquakes, tornados), accidents involving pronounced physical injury (car accidents, major fires, train or plane crashes), or deliberate man-made disasters (rape, assault, torture, bombings, concentration camps, and military combat) (DSM-III, 1980, p. 236).

The DSM-III category of Post-Traumatic Stress Disorder refers to any catastrophic disaster which produces severe stress and leads to stress related symptomatology. Due to the similarity in symptomatology, no distinguishing diagnosis is made between military combat and other traumas which result in the Stress Response syndrome. Characteristic features also involve "diminished responsiveness to the external world," which is referred to as "psychic numbing" or "emotional anesthesia," and "detachment, estrangement, loss of interest in significant activities," as well as a significant decrease in the ability to feel emotions of any type, especially those associated with intimacy, tenderness, sexuality."

Re-experiencing of the traumatic event is an essential characteristic of PTS. Typically, the individual experiences "recurrent, painful, intrusive recollection" of the event (DSM-III, 1980), which is evidenced by the subjective experiencing of mental imagery. The

continuum ranges from experiencing a non-vivid to vivid momentary memory or flash of re-experiencing to a revivification, i.e., complete flashback. DSM-III refers to this phenomena as "dissociative like states...components of the event are relived and the individual behaves as though he is experiencing the event at that moment" (p. 236). The reliving experience which occurs in the sleep state involves recurrent dreams and nightmares which can be analogous in intensity to complete flashbacks in the waking state. The reliving experience inherently involves intensive imagery phenomena which evoke severe emotional sensations resulting in overwhelming debilitation and dysfunction for Vietnam veterans. It is this aspect of Post Traumatic Stress that this work addresses.

DSM-III Diagnostic Criteria for Post Traumatic Stress Disorder

Diagnostic Criteria for Post Traumatic Stress Disorder is listed in DSM-III as follows:

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

B. Re-experiencing 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 associ-

ation 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. contstricted 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

In his extensive work on trauma and related symptomatology in Vietnam veterans and others who have experienced traumatic events, Horowitz (1976) places crucial nosological emphasis on determining the components of what he terms a general "stress response syndrome." Horowitz believed that a general "stress response syn-

drome" becomes operational post-stress event regardless of the pre-stress personality predisposition. Horowitz and Solomon (1975) state that individuals exposed to severe stress, possibly after an extended period of relief, will experience recurrent intrusive dreams, nightmares, daytime images, and waves of painful emotional re-experience. Concurrently, ideational denial, emotional numbing and behavioral constriction will be in effect (Krystal, 1968; Lifton, 1970; Niederland, 1968; Ostwald & Bittner, 1968). Syndromes have the potential of lasting for decades, as evidenced in studies with World War II veterans and concentration camp survivors (Grinker & Spiegel, 1945; Nefzager, 1970). Studies confirm that these syndromes occur across individuals who vary in predisposition (Horowitz, 1969, 1970; Horowitz & Becker, 1972).

Etinger (1969) found that 99% of 226 concentration camp survivors had some psychiatric disturbance when intensively surveyed years after their concentration camp experience. Of the total population surveyed, 87% had cognitive disturbances, i.e., poor memory and difficulty in concentrating, and 85% had persistent nervousness and irritability; 60% had sleep disturbance and 52% had nightmares.

Niederland (1968) termed the phrase "Survivor Syndrome" in his studies on concentration camp survivors. The syndrome was characterized by "the persistence of multiple symptoms, among which, chronic depression, anxiety reactions, insomnia, nightmares, personality changes, and far-reaching somatization prevail." Anxiety was reported to be the predominant symptom followed by anxiety dreams and characteristic "re-run" nightmares, which were so horrifying

that chronic insomnia resulted.

Lifton (1976) reported similar findings in chronic stress response symptoms in survivors of the atomic holocaust of Hiroshima and Nagasaki, and delineated specific "survivor patterns" in his extensive study on the Buffalo Creek flood disaster. Several categories of stress responses emerged out of the Buffalo Creek study which Lifton considered to be generalized survivor reactions regardless of the stress event.

The first category, "death imprint and related death anxiety" consists of memories and images of the disaster, all associated with death, dying and destruction. The imagery was so vivid thirty months post flood, that Lifton termed them "indelible images," which were consistently associated with anxiety and fear.

The second category, "Death Guilt," involves the survivor's sense of severe self-blame for having survived while other died. Thirty months after the flood at Buffalo Creek, the survivors were plagued by the feeling that there must have been something they could have done to save close relatives and friends who died. Death guilt appeared to be the most pronounced in recurrent dreams which typically involved a symbolic expression of failure and a personal sense of powerlessness associated with the stress event.

The third category of "psychic numbing" was evidenced by all who were involved in the disaster, which involved a "diminished capacity for feeling of all kinds" and resulted in apathy, withdrawal, depression and an overall constriction in living. "Psychic numbing" or massive ideational denial of the stress event, alter-

nating with intrusive imagery manifested within a compulsive repetition, seems to be the most universal response to a major stress event (Lifton, 1976; Horowitz, 1972).

Lifton's fourth category involves "impaired human relationships" and consists of "conflict over need or nurturing as well as strong suspicion of the counterfeit." While survivors of major stress events feel that they are in great need of love and support, they are simultaneously unable to accept genuine affection or emotional sustanence. Unrelieved grief reactions and unresolved death guilt seem to create solid barriers in interpersonal relationships and interactions, which typically impedes progress within the therapeutic situation as well.

Estrangement and distrust predominated in partners twenty-seven months post-flood, who had previously described their relationships as "warm and loving." Anger and unprovoked rage as well as jealousy and resentment have been observed in people who have survived major stress events and are characteristic of people who feel victimized.

Lifton's fifth and final category involves the survivor's ability to give meaning to the experience of the major stress event itself. Lifton describes this as "the capacity of the survivors to give their death encounter significant inner form or formulation." This involves the survivor's ability to find meaning and reason for his experience and is crucial for the resolution of the conflicts which emerge out of the stress experience.

These survivor patterns appear to be universal to all who have experienced a major stress event, whether it involves natural disas-

ters (Lifton, 1976), human-made disasters such as concentration camp experiences (Krystal, 1968), or war experiences. All of these patterns have been explicitly noted to occur in Vietnam veterans, particularly those with extensive combat experience (DeFazio, et al., 1975; Figley, 1977; Strayer & Ellenhorn, 1975).

Horowitz (1973) devised four phases of responses that the individual experiences in varying forms following a major stress event.

Phase I--involves "Outcry." The individual reacts to the initial awareness that the stress event has occurred. This stage involves exhibiting an "almost reflexive emotional expression" upon the first impact of realization of the event. Expressions may involve crying, screaming, panic or fainting.

Phase II--is experienced as denial and numbing, which involve ideational avoidance and behavioral constriction.

Phase III---involves a mixture alternating between denial/numbness and intrusive repetition of images, ideation, recurring nightmares, emotional sensations relating to the trauma, and symbolic behavioral re-enactments of the stress event; this refers to startle reactions with associated reminders, sleep and dream disturbances.

Phase IV--involves the "working through" of the traumatic event resulting in the fifth and final stage of com-

pletion which is evidenced in the diminishment of both the denial/numbing and intrusive responses.

Idiocratic Features of the Vietnam War

> "I have heard from patients or colleagues of the killing of a few thousand people in one bombing raid on an obscure town in the Mekong Delta; the discovery of live babies tied to booby traps hanging from trees; the finding of murdered Vietnamese parents with their dismembered children at their feet; an incident where several soldiers cut off the nose of a U. S. sergeant who apparently needlessly led them into danger; the wholesale slaughter of Vietcong prisoners by Americans because of the realistic judgement that they would escape to attack again if turned over to the authorities in Saigon...There was the fighting itself--the search and destroy missions, ambushes, night patrols, firebases under siege, river boat patrols, and helicopter landings under fire. There was also fear--fear of being hit by an unseen sniper from across a field or paddy, bombing by mistake by your B-52's, hit by your own artillery falling short, hit by your own nepalm, or shot at anywhere. Those in combat, and those in medical facilities, were faced with the world of war--mutilation and agony sometimes so unspeakable that it has taken years to find the words to tell about it." (Lipkin, et al., 1982).

The uniqueness of the Vietnam War sets it apart from all wars which preceded it. In World War II and the Korean War the incidence of psychiatric disorders increased as the intensity of the wars increased. Similarly, as the wars diminished there was the expected decrease in disorders. The delayed symptoms evidenced in veterans who fought in World War II and the Korean War were minimal in quantity if not severity. The question then arises: What factors play

a contributing role to the array of prolonged and seemingly delayed symptomatology evidenced in the Vietnam veteran? What was different about the Vietnam War compared to other wars in which there was U. S. involvement?

One of the most salient factors that contributes to the uniqueness of the Vietnam War was the nature of the war itself. Guerrilla warfare predominated. Brutal attacks came swiftly and fatally in the night by unseen enemies, resulting in the need for twenty-four hour vigilance. Even by day, it was impossible to distinguish the enemy from Vietnamese civilians because no uniforms were worn. Ordinary villagers, often old women and children, formed the opposition. It was not atypical for an elderly woman to create the grenades which would then be attached to children as young as three who served as live booby-traps. In other wars lines of demarcation were delineated which allowed for periods of rest and safety. This was not the case in Vietnam, where all of Vietnam was a battleground to a greater or lesser degree. Lifton states: "...the enemy is everyone and no one, never still, rarely visible, and usually indistinguishable from the ordinary peasant" (Lifton, 1970).

Soldiers experienced a combination of profound inner confusion, terror, and helplessness in the face of constant and unpredictable danger. The only certainty was uncertainty, and it took its toll. Atrocities stemmed out of psychological seeds planted during military training where dehumanization and numbing of emotional responses were selectively reinforced. Vietnamese were referred to as "gooks," "slopes," "dinks," and other pseudonyms to aid in the process of

reducing humans to animated objects. It was a first for American warriors to discover women and children joined in the ranks of hostile forces, and atrocities first emerged out of the killing of this population. In other wars this would have violated normal codes of behavior even in war. The constant psychological warfare imposed by the enemy (i.e., impaling of decapitated heads on poles at night to be encountered and recognized at daybreak), along with the extreme difficulty in discerning the enemy, led to advanced states of what Lifton (1976) terms "psychic numbing." The torturing of prisoners, rape, mutilation, and dismemberment of dead bodies became part of retaliative action; ear chains were worn with pride.

Lipkin et al. state: "In Vietnam everyone learned watchfulness. In the daytime watching the trees, the paddies, the grass; the night, watching the dark. In the towns and cities, watching all the people: who had the grenade? Thomas Jefferson wrote that the price of liberty is eternal vigilance; in Vietnam the price of living was eternal vigilance" (Lipkin et al., 1982).

Body counts were the only method of tabulating military progress in Vietnam. A combat veteran I treated recounted graphically the time when he was asked to drag a two-week old bloated enemy corpse covered with maggots for one mile in unbearably oppressive heat and humidity, for the body count. He felt it was an outrageous (but unfortunately not atypical) request, and promptly cut off the NVA soldier's head to bring back for the count. What has been most difficult for him to deal with today is the ease with which he was able to carry out this act. However, the images of these experi-

ences are currently haunting him mercilessly--fifteen years subsequent to the event.

Terry Reed, an infantryman, in describing mass murder attacks on villages, stated: "To me the war was being ambushed every three to five days, being left with scores of wounded GI's. Then come right back at the enemy by going into an innocent village, destroying and killing the people" (Lifton, 1970). All Vietnamese became symbols for the enemy and were acceptable targets in retaliation for the killing of American buddies. Paul Medlow, in disclosing the events of My Lai, states that he "felt good" after killing Vietnamese civilians and that: "I was getting relieved from what I had seen earlier over there" (Lifton, 1970). Lifton states: "The very act of killing relieves both the fear of being killed as well as re-establishes a sense of order in the soldier's world. The enemy is finally found, and annihilated."

Another major contributing factor to the atypical quality of the Vietnam War was the construction of DEROS (Date of Expected Return from Overseas). From previous wars we had learned that men with the most combat exposure experience greater combat related disorders (Grinker & Spiegel, 1945). During the Korean War a point system was utilized; after the soldier accumulated a certain amount of points, he was sent home regardless of the status of the war. The DEROS system emerged out of this construct. This meant that each soldier's tour of duty would last either 12 or 13 months. Each incoming soldier knew at the outset what his DEROS date would be, and if he was able to survive that time period, he could return

home. The benefits of the DEROS system were obvious. Combat time involvement was delineated, and soldiers were not subjected to being reduced to physical or psychiatric casualties in order to return to the States. The negative consequences of the DEROS system were not quite as immediately apparent. Because each soldier was rotated on his own time frame, based on the theory that each unit should consist of more experienced veterans to aid the less experienced ones at any given point in time, the war therefore became an extremely personalized and isolating experience. Soldiers were incessantly arriving and leaving, which affected the morale and unity of the troops who were deprived of forming cohesive teams from which to draw strength and emotional support. Grinker and Spiegel (1945) noted that the formation of the combat team in wars filters some of the overwhelming stresses of combat, thereby protecting the individual soldier. The DEROS system disallowed this natural shielding process to occur.

Another major difficulty with the DEROS system was that there was a total absence of debriefing once a soldier's tour of duty was completed. World War II veterans spent several weeks or months returning on ships from various parts of the world. This "cooling out" period which the World War II veteran experienced with his buddies, afforded crucial processing time in which to work through some of the war experiences common to the combat group. In contrast, the departure from Vietnam was sudden and solitary. The Vietnam veteran typically found himself sitting at his parents' dinner table, with jungle dirt still beneath his nails forty-eight hours after

departing Vietnam.

Homecoming for most Vietnam veterans typically ranged from being an unpleasant experience to being a nightmare, and is an additional contributing factor to the unusual aspects of this war. The World War II veterans' experiences were the antithesis of what Vietnam veterans experienced. "Welcome home brave soldiers" was the pervasive national sentiment. Parades, banners, movies, and the general zeitgeist was one of pride, warmth and welcome toward returning soldiers. The reasons for the war were obvious; Americans were proud to stand their ground and back their troops and even prouder for the war's victory. Families waited anxiously for their sons to return home and "war stories" were typically a welcome subject, particularly with fathers, some of whom fought in World War I.

In contrast, Vietnam veterans came home to anti-war protesters who met them at the airport carrying signs which read "baby killers" and "murderers." They were virtually spat on by their own generation and despised for their participation in such a controversial war. Veterans were confronted on a daily basis with intense hostility. Families conflicted by anti-war sentiments were negative or ambivalent at best upon hearing their sons' and daughters' stressful experiences of the war.

An attempt by all was made, society and families alike, to brush the war debris under any rug thick enough to disguise the smell of napalm and buring bodies. Parents encouraged their sons and daughters (Vietnam nurses) to forget America's first unwon war and "move on" with their lives. This forced suppression may have, in

part, contributed to the delayed symptoms evidenced currently. The Vietnam warriors were quickly on their way to becoming Forgotten Warriors. What was not expected was the cognitive imbalance which emerged in assimilating the incongruities between the world of Vietnam and "The World" at home.

John Wilson (1979) addresses a particularly crucial factor with regard to the magnitude and severity of delayed PTS symptomatology. Vietnam was America's first "teenage war." The average age of the soldiers was 19.5. Wilson discusses this issue within the context of Erikson's Life Cycle model. According to Erikson (1963), 18 to 19 year olds are at the stage of "Identity versus Role Confusion." For this group of teenage soldiers, being thrust into a war raised issues about self, and what they were doing, which impacted tremendously on the core process of identity. The problems of identity formation became severely intensified, and for many veterans, resulted in a suspension of psychological and psychosocial development. Blank and his colleagues (1982) state: "Post-traumatic stress disorder among Vietnam veterans can be viewed as the result of a profound assault in which severe psychic stress is added to a set of conditions that impair or delay the ability of the individual to proceed with the ongoing task of adult development."

Another salient feature unique to the Vietnam War was the difficulty returning veterans had in finding any sense of purpose for the war; the ideological basis for the war was and continues to be difficult to grasp for many veterans. A survey conducted by Lou Harris Associates (1980) revealed that in 1980 47% of Vietnam

veterans felt that the U. S. should not have gotten involved in Vietnam, 13% abstained, and 40% felt the U. S. was correct in its participation. Blank (1982) suggests that most clinicians treating the 40% of veterans who state affirmation of involvement reveal "underlying feelings of waste and purposelessness when given a neutral and accepting forum in which to express any and all thoughts about the experience." The lack of clear objectives in Vietnam, where territory was constantly taken, given up, and retaken, gave credence to the veterans' increasing sense of the war as purposeless and meaningless. Within this context, the most difficult aspect for many veterans was rampant loss of life for no apparent justifiable cause.

Goodwin (1980) emphasizes another atypical feature of the Vietnam War--the extensive use of illicit drugs, such as cannibis, opium, and heroin. Goodwin suggests that, in conjunction with the DEROS system, the use of drugs to deal with the overwhelming stresses of combat is etiologically related to the submerging and delaying stress symptomatology. Goodwin posits that the use of these drugs aided in the repression and denial of negative events and dysphoric emotions, and facilitated the process of "psychic numbing." The often "delayed" emergence of stress symptomatology typically became increasingly manifest as drug use decreased or was eliminated.

The geographical location of the war produced additional stress for soldiers. Although miserable living conditions exist in any war, Vietnam's climate produced a multitude of additional stressors. The heat (often well over 100 degrees) and humidity were intense.

Monsoon rains and floods lasting for months alternated with oppressive heat. Insects and snakes were a continual source of danger in some areas, and malaria, heat stroke, and dysentary were not uncommon. The poverty environment in Vietnam left many soldiers with memories of starving and deformed children picking over huge piles of garbage created by the American military in search for food.

Finally, there was "no going back to Vietnam." This was the first war in which Americans were unable to return to the scenes of battlesites, due to prohibitive political constraints. The need for working through Vietnam issues and the process of closure is thwarted by the inability of veterans to return to "The Nam."

The Vietnam experience is therefore frozen in time; symbolically untouchable and unalterable. These frozen frames of mental images manifest as indelible imprints in the minds and hearts of the Vietnam Warriors.

Research on Vietnam Veterans

Early research on Vietnam veterans' adjustment difficulties supported the Stress Evaporation perspective. This viewpoint recognized combat as a stressor but viewed symptomatology as temporary, evidenced during or immediately after return from the military, but disappearing after returning home. This perspective argues that few Vietnam veterans experienced long term psychological distress. Questions were also raised concerning predisposing factors such as

pre-military adjustment, family life and characterological predisposition.

The most widely cited research in support of the Stress Evaporation perspective are the findings of Borus (1973a; 1973b; 1973c, 1974). Borus found that only 23% of the 765 Vietnam veterans he interviewed evidenced emotional difficulties during the first seven months prior to their return home, and that there were no significant differences between the veteran and non-veteran groups.

Panzarella and colleagues (1978) studied 143 soldiers seeking psychiatric services. Thirty-four veterans who experienced one tour in Vietnam were also included. Under investigation was the psychiatric fallout rate among Vietnam veterans based on factor analysis of two adjective and symptom checklists. Their results concluded that there is no evidence of specific psychiatric symptomatology unique to those who served in Vietnam in comparison to soldiers who did not.

Unfortunately many of these earlier studies (Borus, 1973; Panzarella, 1978; Segal & Segal, 1976) were deficient in addressing differences between combat and non-combat veterans as well as in investigating the degree of combat exposure. Studies of veterans and other survivors (Lifton, 1976) have since consistently supported the theory that the level of exposure and intensity of the catastrophic experience are the best indicators of the intensity of symptoms of stress reaction. Researchers have also found that there are significant differences in combat related stress symptomatology between Vietnam veterans who experienced combat and those that did

not (DeFazio, Rustin, & Diamond, 1975; Figley, 1977; Strayer & Ellenhorn, 1975).

Borus (1973) and Panzarella (1978), who supported the Stress Evaporation perspective, had severe methodological limitations in their investigations. Veterans were not assessed by levels of combat experience and respondents in their investigation were still on active durty in the military and under the auspices of the system. Revealing psychological difficulties could result in negative consequences. Also, the sampling of this population while still in service did not take into account the delayed aspects of stress response symptomatology which may more concretely evidence itself years subsequent to tour of duty in Vietnam. Follow-up data were non-existent. Also, while Borus' sample population consisted of veterans, the comparison group consisted of non-veterans who were military personnel. Typically, the findings supporting the Stress Evaporation perspective are inadequate in assessing the impact of the traumatic event, the stressor variable itself--participation in combat.

The most current research findings on Vietnam veterans experiencing the Post Traumatic Stress symptom cluster are concordant with the Residual Stress perpsepctive. This theory emphasizes that combat related stress disorders are inevitable, and that stress symptomatology becomes evident subsequent to return home from the military. Symptoms may not become evident until one to two years subsequent to discharge.

Horowitz and Solomon (1975), based on their experience with

Vietnam veterans receiving psychiatric treatment at a Veterans Administration hospital, predicted that clinicians will find an increase in the number of veterans experiencing symptoms of delayed stress. They labeled this cluster of symptomatology the Delayed Stress Response Syndrome (DSRS). Horowitz and Solomon predicted that after a latency period characterized by relief, there would follow: (a) stress imagery and nightmares manifested in difficulties in integrating the memories and associations of Vietnam experience with past, present and future events; (b) impaired self-concept; (c) depersonalization; (d) depression; (e) shame; (f) frustration and active rage; (g) impaired social relationships; (h) aggressive and destructive behavior; and (i) fear of loss of control over hostile impulses.

A large scale study by Egendorf et al. (1981) developed the Stress Reaction Scale which incorporated most of the PTS symptoms cited in DSM-III (1980). Factor analyses were conducted which supported the following criteria as representative of the stress reaction: (1) memory difficulty; (2) loss of interest; (3) thought confusion; (4) nightmares; (5) feelings of loss of control; and (6) panic attacks. The investigators concluded that: "The Stress Reaction Scale reveals that Vietnam veterans who served in heavy combat continue to suffer from more stress reaction symptoms than other Vietnam era veterans and comparable men who were not in the military during the years of the Vietnam War."

Strayer and Ellenhorn (1975) interviewed 40 randomly selected veterans who were discharged from the Army during the Vietnam War.

Their investigation focused on differentiating those with adjustment difficulties, disorientation, violent acting out, bitterness, hopelessness, apathy, and those who were able to assimilate their war experience and become reintegrated into society. Their results indicated "that depressions, hostility, guilt and overall maladjustment are experienced by a diverse and large number of Vietnam Army Veterans," and that the severity of adjustment problems was highly correlated with degree of combat involvement. Degress of combat exposure was significantly associated with severity of symptomatology manifesting in a negative attitude toward the war, guilt, depression, and feelings of hostility.

A large epidemiological study (Helzen, Robins, & Davis, 1974; Robins, Davis, & Goodwin, 1974) focused on Vietnam veteran returnees eight to twelve months post discharge. They concluded that depressive syndromes were evident in many of the veterans and were significantly more frequent in combat vetreans as well as in those who lost friends in combat. Combat experience was the significant factor in accounting for adjustment difficulties.

Findings of DeFazio, Rustin, and Diamond (1975) provide additional support for the assertion that combat veterans differ from non-combat veterans. Results indicated that combat veterans reported significantly more difficulties than non-combat veterans with regard to the following: "disturbed sleep, feeling blue, having something wrong with one's mind, belief that one is more nervous than others, that life is a strain, that one is a hothead; and 44% stated they were unable to relax and found it hard to get close to others."

Sixty-eight percent of the sample population also reported frequent nightmares. DeFazio et al. state that the veterans in the sample "represent one of the most fortunate, well-motivated, and intelligent groups of veterans...if such symptoms exist among a large minority of veterans (college students) who have shown their intelligence, coping skills, patience, and perseverance in the face of difficulty, what must the situations be like for the majority of veterans who are totally unemployed, imprisoned or hospitalized?" (DeFazio et al., 1975).

Figley and Eisenhart (1975), in a study investigating psychological adjustment in veterans, found that non-combat veterans were involved in less physical fights, arguments, difficulties with the law, violent dreams and violent fantasies than combat veterans. Non-combat veterans had better established friendships and less involvement with drugs. Similarly, Haley's (1974) findings in a study involving 75 Veterans Administration outpatient Vietnam combat veterans, concluded that over 75% of veterans who were involved in combat were experiencing symptomatology related to stressors.

Yankelovich (1974) found significant differences between Vietnam veterans and non-veterans in his extensive investigation of a non-college population. His findings indicated that veterans felt greater alienation from society, had double the unemployment rate, were more lax in moral perspective, more liberal on social and political issues, had a generally lower morale, and were more pessimistic about their own future than were non-veterans.

Harris and associates (1980) investigated attitudes toward

Vietnam era veterans. Twenty-five hundred Vietnam era veterans were obtained through a national probability sampling participated in the study. Seventeen percent of these veterans stated that they were experiencing psychological difficulties, and 69% stated that they attributed their difficulties to their experiences in Vietnam. Although most clinicians familiar with stress disorders of Vietnam veterans argree (however unofficially) that compensation for PTS should undoubtedly exist, they also acknowledge that the receiving of compensation necessitates a commitment to the "sick role" which inherently impedes therapeutic progress. It also serves to strengthen the veterans' convictions that etiology of disturbance is strictly Vietnam related.

Pollock, White, and Gold (1975), in their study of 54 combat veterans attending college, found that these veterans differed significantly from non-combat veterans in that the combat veterans held notably differing political views from non-combat veterans, were more alienated from U. S. involvement in Vietnam, were externally oriented, felt unable to control their own future, and were less against using violence as a means of persuasion.

Pollock et al. concluded:

> Our study indicates that the political role disintegration of combat veterans is thorough, enduring and cumulative, a civic tragedy of considerable dimensions. Unless the veterans are able to locate or force new civic roles appropriate to the experiences they have undergone, the consequences for both them and the society could be shattering. (Pollock et al., 1975)

Although there has been little emphasis on the researching of

Vietnam family readjustment difficulties, Hunter (1976) presents findings from several studies which focus on the POW veteran and his family. Their findings concluded that imprisonment has immediate as well as long term effects on psychosocial adjustment. Hunter also notes: "Psychiatric pathology became more associated with the marital relationship over the years, and by the two year post-release evaluation, marital maladjustment was more prevalent than any other factor." Although not documented, an increasing number of clinicians are currently witnessing similar situations among Vietnam combat veterans and their wives.

Nace, Meyers, O'Brien, and Ream (1975) studied 150 Vietnam veterans who were in a follow-up group (two years post-discharge from Vietnam) for medical or drug related treatment. Thirty-five percent of the sample scored within the "clinically depressed" range on the Beck Depression Inventory, and another 15% ranged within the "mild depressed" category. Their findings reported that combat veterans were more depressed, had received more disciplinary measures while in Vietnam, had somewhat less education, and had higher incidence of separation and divorce or single status, compared with non-depressed veterans.

Figley and Southerly (1977) did extensive interviews with 906 Vietnam era veterans. Their findings indicated that combat veterans report significantly greater intrusive imagery in the form of sleep disturbances, recurring dreams and nightmares than non-combat veterans. Wilson and Doyle (1977) found that a significantly large percentage of Vietnam veterans are currently experiencing severe

symptoms of stress, including relational difficulties, alienation and nightmares about combat and Vietnam.

Conclusions of most researchers support the findings that within the Vietnam population, Vietnam combat veterans differ significantly from non-combat Vietnam veterans and from Vietnam era veterans in that severity of symptomatology increases proportionally to the severity of the stressor event experienced. Research findings overwhelmingly support the Residual Stress perspective and conclude that Vietnam veterans differ significantly from others in relation to (a) psychological symptoms; (b) levels of depression; (c) adjustment difficulties; (d) societal alienation; and (e) attitude toward violence.

Blank et al. (1982) describe the varying forms that the Post Traumatic Stress Disorder takes for Vietnam veterans. The first category involves Specific Psychological Symptomatology. Stress symptoms fall into approximately eight categories.

(1) Nightmares, intrusive daytime images and flash-backs, numbing of affect, anxiety, insomnia, depression, irritability, reactive rage.

(2) Impacted grief often manifesting initially in apparent depression.

(3) Psychosomatic complaints, i.e., headaches, lower back pain, ulcers, migraines.

(4) Violence, paranoia, suspicion, hostility, irri-tability, phobia regarding crowds and public places.

(5) Addiction to alcohol, marijuana, cocaine, heroin, gambling or thrills in dangerous experience and risk taking. Substance abuse often overshadows an underlying stress disorder and camouflages it for years.

(6) Exacerbation of minor characterological difficulties; i.e., impulsiveness, features of sociopathy.

(7) Suicides and homicides. While the number of homicides committed by Vietnam veterans is quite small, the number of Vietnam veterans who have committed suicide is substantial. Although it is difficult to ferret out veteran suicides related to war experience from the general high rate of suicides for all males between the ages of 21 and 34, clinicians are nevertheless concerned that the current increase in male suicides in this age range could theoretically be linked to the high rate of Vietnam veteran suicides.

(8) Chronic or intermittent psychosis-like symptoms and severe life impairment.

Alterations of Life Course is another form of PTSD in which veterans exhibit:

(1) Chronic underachieving in education or work.

(2) A wandering lifestyle. This category points to

the common syndrome inability of the veteran to maintain employment or attendance in school. Veterans go from job to job; goals are never reached.

(3) Antisocial criminal acts that are not a result of premorbid history but of the stress disorder.

The third form of PTSD can manifest in several forms, but all involve Relating to Significant Others.

(1) Severe difficulties in achieving intimacy, including sexual intimacy with partner.

(2) Difficulties in relating to children, which typically stems out of the veteran's participation in, or observation of, or hearing about incidents in which Vietnamese children were hurt or killed.

(3) Markedly diminished sense of connectedness to America, the government and its institutions. A loss of patriotism is evidenced due to feelings of betrayal by government officials regarding the "unwon" and "unjust" war of Vietnam.

(4) General alienation from normal developmental life processes; i.e., marriage, career, social and political realms. Many veterans were developmentally fixated at age 19 or 20 and lack sophistication in dealing with everyday living.

The final category evident in PTSD involves Concepts of Self-Reality.

> For veterans with this kind of stress disorder there is a "profound shattering of basic concepts of self and humanity" (Blank et al., 1982). Lifton (1980) termed this concept "the broken connection" and asserts that "enormous suffering, meaningless misery, exposure to mutilation" (much like the concentration camp survivors) have seemingly caused loss of basic faith in the goodness of humanity.

The Reliving Experience of Vietnam Veterans

One of the most dramatic manifestations of the Post Traumatic Stress Disorder is the Reliving Experience. Intrusive daytime images and thoughts, recurrent dreams, nightmares, flashbacks, and complete revivication of the Vietnam experience thrive within many Vietnam warriors. They capture the veteran in a timeless never-ending intrapsychic war, as vivid, as real, and as terrifying as the war itself.

Flashbacks

Hendin and associates (1984) found that, among 100 Post Traumatic Stress cases, 20% had episodes in which they suddenly felt or acted as if traumatic events which were experienced in Vietnam were recurring. These veterans were not distinguishable from those who

did not have reliving experiences on the basis of pre-combat variables. Hendin et al. state: "Veterans with Post Traumatic Stress Disorders have often been so transformed by their combat experiences that they have difficulty in reconciling who they were with what they have become. This dimension of the disorder appears to be particularly acute in those veterans with reliving experiences."

Kadusin and colleagues (1981) reported that approximately 17% of the 549 Vietnam era veterans investigated experienced flashbacks. Although there is a paucity of indepth research on content of flashbacks, anecdotal descriptions cite environmental precipitators that are reminiscent of Vietnam. Any sensory modality may be affected: visual, auditory, kinesthetic, or olfactory. It is not atypical for the smell of burning wood or leaves to facilitate the re-experiencing of the smell of napalmed bodies, as the sight of a dead squirrel in the road can evoke a re-experience of observing dismembered buddies.

Confirming the findings of Wilson and Dodd cited previously, Kolb (1982) investigated flashbacks in a controlled study of Vietnam veteran subjects. Flashbacks followed respondents' listening to a 30-second combat soundtrack while under light barbiturate narcosis. Fourteen of the 18 subjects evidenced flashback symptomatology, including alertness, fighting, fleeing, crying, and affective alterations which included fear, rage, sadness, and guilt. Verbal reliving of the traumatic scene was also exhibited.

Intrusive Thoughts and Images

In their investigation of 2,453 Vietnam era veterans, Harris and associates (1980) found that 13% reported being frightened by memories of death and dying, and 80% of the respondents felt that military experience was the prime factor causing the symptomatology. Similar to other findings, intrusive thoughts corresponding to recurrent memories of battle were found more likely to occur in veterans who had experienced heavy combat.

Horowitz and colleagues (1980) investigated 66 subjects with stress response syndromes and 51% reported intrusive thoughts and images while trying to sleep.

Horowitz and Becker (1971) investigated the frequency of repetitive and intrusive thoughts following the showing of a stressful film. Thirty-one male college students were shown two movies, one neutral and one stressful. Significantly more intrusive thoughts were found among respondents who viewed the stressful film. Thought content was film-related and associational.

Nightmares

DeFazio and colleagues (1975) found that over 50% of the respondents in an investigation of 207 community college Vietnam veterans reported frequent nightmares. Dreams and terrifying nightmares occurred more often among combat veterans as compared to non-combat veterans and non-veterans. Confirming these findings in a separate investigation, DeFazio found that 67% of recently returned combat veterans from Vietnam had nightmares.

Veterans often describe themselves as helpless in combat situations during these night terrors. Automatic weapons suddenly become jammed or the soldier finds himself surrounded by the enemy and about to be captured, tortured, or killed. Onset of combat nightmares can follow environmental stimuli that remind the veteran of Vietnam. Viewing a Vietnamese refugee in the street, intense heat or downpour of rain in the summer (reminiscent of the monsoons) are sufficient precipitators.

Figley and Southerly (1977), in their investigation of combat veterans' nightmares, concluded that they are characterized by: (1) repeated occurrence; (2) dream content related to military service; (3) the causing of veterans to fight or fear sleep; and (4) waking them from sleep.

In a Boston Veterans Administration outpatient clinic, Van der Kolk and colleagues (1981) assessed 410 Vietnam era veterans via questionnaires related to nightmares. Of the 199 combat veterans, 59% reported experiencing nightmares more frequently than once a month, usually with combat-related content, in contrast to 27% of those who had not experienced combat. Van der Kolk and colleagues continued their investigations with subjects from the Boston Veterans Administration outpatient clinic (1981), as well as with respondents referred by Vietnam veterans outreach centers. Findings concluded that traumatic nightmares of combat veterans differed significantly from nightmares of non-combat veterans in that they tended to occur earlier in the sleep cycle, tended to be repetitive, were typically exact replicas of actual battle events, and were

always accompanied by gross body movements. Some of the respondents reported occasional physical attacks on sleeping partners, typically in the form of beatings and stranglings. All subjects with traumatic nightmares evidenced other imagery-related PTS symptomatology, i.e., recurrent recollections, flashbacks, as well as other PTS symptoms, i.e., psychic numbing, and inability to tolerate intimacy. In a follow-up of World War II and Korean War combat veterans, Van der Kolk and colleagues also found that out of 529 veterans, 32% had frequent combat-related nightmares.

Horowitz and colleagues' (1980) investigation of 66 subjects with Stress Response Syndrome concluded that 54% had bad dreams related to the stressor event.

Wilmer (1982) studied 44 combat veterans in an investigation of combat nightmares. Sixty-four percent of the veterans reported experiencing nightmares. Wilmer's findings demonstrated that there are four categories of combat nightmares:

Class I nightmares are the most frequently experienced and the most difficult to treat psychologically or pharmaceutically. These dreams are replications of the "dominant traumatic event." The dreams appear as finite images that are turned on and off as if controlled by a switch, and there is no association to other images. Similarity of content is consistent and predictable. Wilmer states that it can be likened to "an engram experienced as a vision," and can be thought of as organic in nature. Dream images are vivid, typically include color, smell and sound and are usually recurring, commencing anywhere from a few weeks subsequent to homecoming to 10

years later. These dreams are the most memorable war dreams and will continue as frequently as every night to several times a week, to once or twice a month or less. Class I nightmares represent 46% of the reported dreams.

Class II nightmares involved nightmares of events that were untrue in the veterans' experineces, but could have potentially occurred in the war.

Class III nightmares tended to be metaphorical in nature, were events that were untrue of the veterans' war experiences, and were unlikely to occur in Vietnam.

Class IV nightmares were completely divorced from any reality of war experience.

Case Studies

PTS imagery symptomatology is presented graphically in the following two case studies cited by Hendin et al. (1984) and aptly illustrates the potential dangers and profound disruptions resultant of the Vietnam veterans' Reliving Experiences.

Case 1. Mr. M. was a stocky, muscular man in his mid 30s who was married, had four children, and had worked for 14 years for the highway department as a bulldozer operator. He had grown up in an intact farming family and had shown no evidence of social or emotional difficulty prior to his combat experience. He had been in Vietnam in 1966, and had served with various infantry units primarily in the northern provinces. His major assignment was as a machine gun operator on an armoured personnel carrier.

He married soon after his return from Vietnam but during the postwar years, he gradually withdrew from his family, spending more and more time alone in his bedroom thinking and reading about Vietnam. In the last few years he had also begun to drink heavily, and had increasingly thought of taking his own life.

Although he related his combat experiences with a good deal of affect, at times becoming angry and at other times tearful, he was

vague and claimed not to remember any details. Outstanding in his recollections were the repulsion he felt at being exposed to dead and mutilated American soldiers whose bodies he and his comrades often carried back to the base in their vehicle, his awareness that in "free fire zones" they had killed unarmed civilians, and his vague descriptions of sexual involvements with Vietnamese prostitutes in which he had been physically abusive.

His posttraumatic stress disorder was characterized by reliving experiences which he described as "weird things I do that I have no memory of." When initially seen, he had been hospitalized for the first time after getting drunk at a friend's house, wrecking furniture, and then running out and shooting an imaginary Vietcong in a nearby field. A few months earlier, also while intoxicated, he had set a fire in his kitchen, claiming he was burning out Vietcong. He was sorrowful and upset in discussing this incident, saying he had a lovely family and expressing the fear he might do something to harm them.

Not all of his reliving experiences took place when he had been drinking. After he went to sleep at night he had often been found by his wife crawling around the house with a gun as though he were back in combat. Once when hunting he felt another hunter was firing at him and started to fire back, but his brother who was with him told him to stop. Several times during sex he had referred to his wife as "mama san." During one reliving experience he pointed a gun at her while speaking to her in a sexually derogatory manner.

When not reliving his Vietnam experiences he avoided talking about them, particularly with his wife. Yet, the reliving appeared to be a way of communicating to her and to others things he was unable to talk about.

In therapy he gradually became able to discuss his combat experience in detail as well as his reaction to them. Virtually all of his reliving experiences turned out to be elaborations of those aspects of combat over which he was most troubled. His random shooting in the field was connected to a sense he had had in the last months of his tour that he was out of control and firing at "anything that moved." His setting fire in his kitchen related to an incident where he had refused to crawl down an underground tunnel in pursuit of Vietcong, and had persuaded his sergeant to burn them out instead. The hunting incident in which he almost shot another hunter bore a striking similarity to a time where, during a firefight, he had killed another American whom he had mistaken for a Vietcong. The incident with his wife and the gun bore a direct parallel to his behavior with a Vietcong prostitute whom he had hit over the head with his gun after discovering her going through his friend's wallet.

He seemed to feel that his behavior in Vietnam had been a true reflection of the sort of person he really was. As he became aware of his guilt over his combat behavior and the ways in which he needed to confess and to be punished, he began to make Vietnam a part of his life over which he had some control. He stopped drinking and became able to share with his wife the details of his combat

experiences. After several months his mood lifted considerably and he has able to leave the hospital and return to his family and his job. He was seen once a week for the next 6 months and showed considerable abatement of his stress symptoms and no return of his reliving experiences.

Case 2. After a distinguished tour as an Army helicopter pilot in Vietnam for which he received a Presidential Unit Citation, a Valorous Unit Award, 14 air medals, and a Purple Heart, Mr. B., when first seen at the age of 41, was a prison inmate serving a 2 to 6 year term for bank robbery. He had grown up in a warm, supportive family in a rural area of New York State. He had done well in school, had a good administrative job, and was happily married with two children when he entered the service in early 1968, hoping to later use service benefits to go to veterinary school.

Several particularly traumatic combat experiences played a role in the reliving episodes which were a major feature of the posttraumatic stres disorder he developed after his return from Vietnam. He had once been ordered, along with several other pilots, to fly a mission in a storm which resulted in the loss of one of the planes and several of his friends. Caught in the center of the storm, ice formed on the wings of his own helicopter, the motor stalled several times, and the plane was sucked up and down at the will of the storm. His base was unable to pick him up on radar, his instruments failed, and he thought he would not survive. Finally, he was able to contact a ground unit who fired flares to direct him to a landing.

Two of his traumatic combat memories involved women. On one occasion he was shot many times by a Vietcong woman who fired directly at him after his helicopter had landed in a combat assault, and he survived only because of the armor in his flight jacket. During another combat assault into Cambodia he was fired at from point blank range by a woman whose gun contained nails. He escaped injury by ducking behind his seat until someone else was able to kill the woman. The latter incident had occurred on a particularly hot day on which his unit had wiped out an entire village while everyone was taking a midday rest. He felt the woman was justified in defending her village and regretted having been part of an assault which he believed should never have taken place.

Another of his horrifying memories was of the severed head of an American soldier which he had seen from his plane in the light of exploding artillery shells. The head, which seemed to be frozen in the expression of a scream was later put in a body bag with the rest of the soldier's body, and was flown back to the base in Mr. B.'s helicopter.

Although he had been faithful to his wife during his marriage, while in Vietnam Mr. B used constant sexual involvements with Vietnamese prostitutes to relieve his anxiety. He described himself as having used sex the way other soldiers used drugs or alcohol.

On one occasion during his tour of duty he could not be fully aroused to go on a mission. He told the man awakening him to go to

hell, and went back to sleep, and when he awoke later he had no recollection of what had occurred. The doctor who then spoke with him considered sending him home, but Mr. B. persuaded him not to and the episode was not repeated.

He returned home with the intention of pursuing his flying through a career in the Army. Almost immediately, however, he began to experience severe insomnia, nightmares, reliving experiences, and an explosive temper that made his functioning in both the Army and in his marriage impossible. He tried to get psychiatric help but was told that "pilots don't see shrinks." His promiscuous sexual behavior continued and eventually his involvements with the wives of several officers at the base led to legal difficulties and a less-than-honorable discharge which made him ineligible for veterans benefits.

For the next several years, he intermittently worked as a pilot for several small companies, and during this period he became addicted to heroin which he had initially used in order to sleep. Bitter and angry with the government, he joined several other Vietnam veterans in committing a number of bank robberies from 1969 to 1976. The last robbery was done with his second wife who, in the course of their marital breakup in 1980, turned him into the police in exchange for immunity for herself.

The reliving experiences which characterized Mr. B.'s posttraumatic stress disorder involved several of his combat traumas, although the thunderstorm experience and the time he was wounded were predominant. These experiences were frequently set off when he was driving his car and would suddenly begin re-experiencing his helicopter being tossed back and forth in the thunderstorm. Thinking he was actually flying, he had several times driven the car off the road. On other occasions he would relive being shot by the Vietnamese woman and would become so totally swept up in the experience that he would feel the impact of the bullets and fall backward.

Periods of insomnia characterized by combat nightmares would make him more prone to reliving experiences. Sometimes he would go from the nightmares to the reliving experiences with no clearcut period of wakefulness.

For the first 10 years after returning from Vietnam, Mr. B. also had a more prolonged type of dissociative episode in which he was unable to account for his actions or whereabouts for periods of several days or even weeks. Sometimes he would find himself with a woman in another city and would not recall how he got there. He was also amnestic for most of the details of the bank robberies. In some cases he could recall planning them, in other he could only recall waking up with a gun and large amounts of money on his bed.

In 1978, when he stopped working as a pilot and was able to get off heroin, the dissociative episodes for which he would have amnesia ceased. Since that time he had also gained greater control of his reliving experiences. When he would become caught up in reliving combat events, he would have a sense that what was happening was unreal and he would not act on the experience. In time he developed

the ability to recognize that the events "were only taking place in my head." Gradually he was able to tell when the experiences were about to develop and would protect himself by staying in his room.

During once-a-week treatment over the course of a year, it was possible to observe some of the events that triggered his reliving experiences. The most apparent was the time of the year. Around the anniversary of the episode when his helicopter was caught in the storm and that in which a combat assault had cost his company many lives and left him with the memory of the severed head, he would grow increasingly apprehensive and have nightmares and reliving experiences concerning these events; very hot weather would trigger reliving experiences of the combat assault that was done on a hot day.

His anger toward everyone he felt should have helped him and did not was pervasive. In leaving his family and robbing banks he had acted on his anger, but his conflict over his feelings caused much of this behavior to take place in a dissociated state.

Historical Overview of Imagery Application

Imagery techniques have been utilized for centuries as a means of exploring the inner world of the psyche in the search for deeper self-knowledge.

Every ancient culture used visualization as a means of obtaining psychological growth and spiritual evolution. The Egyptian Hermes Trismegistres believed that "The All" created the universe mentally, similar to humankind's creation of mental images. Hermetic philosophy stated that images created and held in the mind affect the physical manifestations in one's life. Focusing on particular images would have particular effects. The Hermes believed that thoughts have corresponding characteristics to the physical world and, possess vibrational and energy levels which manifest changes in the physical universe. They practiced a process called "transmutation" in which spiritual development was facilitated by

changing their mental state from negative to positive emotion; i.e., hate to love or fear to courage. Learning to control and manipulate one's mental image was crucial in the "transmutation" process. Egyptian followers of Hermes focused entirely on mind and even disease was believed to be cured by visualizing the object of one's desires; in this context, perfect health. Similarly, holding the image of a healing God was believed to bring about a state of health in the physical world (Jayne, 1925). Hermetic principles of healing with imaging influenced Greek, medieval, and even modern healing practices. Greek healers practiced by having patients dream of being healed by the Gods.

In the 16th century, Paracelsus, a Swiss physician, believed that "The power of the imagination is a great factor in medicine. It may produce diseases in man and it may cure them" (Hartmann, 1973). Shamanistic philosophy espoused that illness occurred due to disharmony in the sick person's world. Shamans visualized reuniting the patient with his soul; symbolic of wholistic thought.

Visualization practices which concentrated on images were utilized as part of Indian yogic practices in ancient times. The Yoga Sutra of Patanjali (200 B.C.) emphasized the discipline of the focusing of one's attention on a particular place (dharana), aided by positive suggestions (dhyana), and reaching ultimate union with the object being concentrated upon (Samadhi). The Yoga Sutras state that when a person achieves union with the object, truth of the object emerges, and the flow of consciousness is peaceful and undisturbed.

Tantric Yoga is another intricate system which advocates the mind's focus on images to achieve specific effect. Tantric philosophy became prominent in India (6th century A.D.) and seemed to develop out of a response to what was termed the "Kali-Yuga" or "dark age" during which humankind was focused on body rather than spirit. Tantrism utilized mental images projected onto an inner screen in one's mind; this is a visualization procedure widely employed today by clinical practicioners utilizing imagery techniques.

The existence of images in inner experience was believed by philosophers and psychologists to be self-evident and valid until the early 20th century. William James, Francis Galton, and pioneering psychologists in the school of structuralism (i.e., Wundt and Tichener) believed the image to be a fundamental phenomenon of intrapsychic experience. American psychologists, led by John Watson, opposed Tichener as the psychological zeitgeist began to reflect the gravitation towards scientific methodology in which subjects worthy of exploration were exclusively areas in which quantifiable measurement could be utilized, duplicated, and predicted. Under Watson's leadership, psychology became the "science of behavior" rather than the study of inner processes. Almost half a century passed before a new climate of thought in the West (influenced by Eastern religions and philosophy) led American psychologists to a renewed interest in the abstract inner creations of the mind. In 1964, Robert Holt wrote a paper entitled, Imagery: The Return of the Ostracized, welcoming back imagery and the process of visualization as an important area of scientific study.

For European clinicians, imagery utilization as a therapeutic method arose out of four key objections to traditional therapy: the limitations of verbal dialogue, analytical interpretation and emphasis on the past, the high value placed on transference phenomena, and its consequent length of treatment (Watkins, 1976).

Most clinicians who utilize imagery phenomena agree that working on a symbolic non-verbal level allows for representation of the unconscious to be more directly and succinctly expressed. Emphasis is not placed on interpretation of emergent imagery material, but rather on the experiences of the imagination itself. European clinicians viewed imagery visualization as intrinsically therapeutic, resulting in personality alteration. There are, however, a number of aspects which need to be addressed before imagery utilization could be viewed as a therapeutic technique. Watkins (1976) asserts that the therapist must teach the client: "...to relax, to separate his consciousness from its usual contents, to turn his awareness towards the movements of the imaginal; how to help him learn to enter into his imaginary body, to insert himself in the imaginary scene, to move within it, to encounter threatening images and to allow affect to arise; how to recognize and work with resistances; how or whether to interpret and analyze the waking dream; and how to see the patients' experience in the imaginal realm in relation to other aspects of existence."

Research also emphasizes evidence that a reclining position elicits greater vividness of imagery than does an upright body position (Morgan & Bakan, 1965). Berdach and Bakan (1967) obtained

memory material from subjects in both reclining and sitting positions, and found that earlier and more frequent memories occurred when subjects were in a reclining position. It is not improbable that reclining on the couch in analytical therapies may in part have facilitated spontaneous production and emergence of greater imagery material than in other therapeutic approaches.

Clinical Applications of Imagery

The use of imagery in the hypnotic state was first utilized in psychotherapy by Breuer and Freud (1895) in their case study of Anna O. Breuer coined the term "cathartic method" in Freud's and Breuer's Studies on Hysteria (1895). They discovered that in catharsis, old memories are re-lived and that imagery is primarily visual, "often nearly hallucinatory in intensity." Freud employed hypnotic techniques and encouraged his patients to have visual images in order to facilitate the re-living of what he believed to be repressed traumatic events of early life.

In 1892 Freud overtly discarded hypnosis because of its interference with transference and resistance processes. It also became evident that he was not particularly adept at hypnotizing patients. Instead, Freud employed what he termed a "concentration" technique. Freud directed his patients to a reclining position with eyes closed. The patient was encouraged to concentrate attention on a specific symptom and any associated memories which might emerge, and then to form an image relevant to the time when the symptom first

appeared. If progress was impeded, Freud pressed his hand against the patient's forehead with assurances that when he lifted his hand a memory or thought would form (perhaps a visual image) and urged patients to report all the details of the image and associated emotions (Strachey, 1955). Although it sometimes took several attempts to obtain the desired results, Freud reported that the images and emotions always emerged. This led him to acknowledge that "it is possible for thought-process to become conscious through a reversion to visual residues--in many people, this seems to be a favorite method," and that "thinking in pictures...approximates more closely to unconscious processes than does thinking in words and it is unquestionably older than the latter, both ontogenetically and phylogenetically" (Strachey, 1955).

Freud's early work with imagery was de-emphasized as he discontinued his use of hypnosis in favor of his method of "free association." Singer (1971) notes that this shift may have been ill-advised as research has demonstrated that more "primary process material and associated affect, more direct expression and less defensiveness, can be correlated with experiences of visual imagery than from their verbal associates." This suggests that visual imagery is not merely "thinking but in the form of pictures," but has alternate qualities than verbal cognition (Reyher & Smeltzer, 1968).

Although Freud relinquished specific interest in imagery production, imagery was far from exluded from the analytical session. The re-experiencing of dream material was central to the analytic

endeavor, as was the exploration of daydream material and evocation of early memories, which necessarily involved significant degrees of visual or auditory imagery.

Clark (1925) was one of the early members of the psychoanalytic movement who was interested in various forms of imaginal experience. Clark emphasized integration of psychoanalytic perspective with the experiences of "induced revery." In this process he encouraged his patients to use visual imagery in what he termed "phantasms" in order to return to their childhood anamnesis. Patients, in a reclining poisition with eyes closed, would describe sensations, attitudes and behavior of childhood episodes (Virel & Fretigney, 1968).

Although patients often believed that the contents of their "reverie" were actual memories, Freud viewed the accounting of these memories to actually be fantasies which revealed fixations and disturbances. Clark focused on discovering the diversions from fact embedded within the "phantasm." He asserted that progress was dependent on a closer relation to the imagery, rather than a more cognitive intellectual understanding of the individual's dynamics within the process of psychoanalysis. This was facilitated through Clark's process of "secondary introspection" in which the patient reported on his complete experience of his imagery "seance." As in analysis, Clark viewed patients' omissions and refusals to do the reporting as resistance.

Clark's ultimate goal within the therapeutic situation was the achievement of catharsis, which involved maintenance of the "child-like state of defenselessness" involved in the "secondary introspec-

tion" process until affectivity was evoked. Clark also utilized a method of free association of imagery, in which the patient would describe the flow of images as they occurred, rather than associating from word to word (Singer, 1971).

Jung's method of "Active Imagination" was distinctly different than other European approaches to imagery, in that he believed that imagery work should occur toward termination of one's analysis. Also central to Jung's method was that the patient involved himself in the imagery process without the active participation of the therapist.

Departing from Freudian interpretation, Jung asserted that the unconscious was purposive, not merely repressive. Jung believed that within an "active imagination" or dream, symbolic contents were not only references to memory and real things in the external world, but represented various elements of the individual himself.

Particularly during critical periods in patients' analyses, when polarities within the psyche necessitated some form of image integration, Jung found that dreams and images emerged spontaneously. Through awareness of and participation in the daydreams, "passive fantasy" was transformed, as was the conscious personality. Images became psychically real and were viewed in terms of "archetypes" thriving within the "collective unconscious."

Hull (1971) cites a quote from Psychologica Types (Jung, 1921) as the earliest formulation of Active Imagination:

> We can distinguish between active and passive fantasy. Active fantasies are the product of intuition; i.e., they are evoked by an attitude

> directed to the perception of unconscious contents, as a result of which the libido immediately invests all the elements emerging from the unconscious and, by association with parallel material, brings them into clear focus in visual form. Passive fantasies always have their origin in an unconscious process that is antithetical to consciousness, but invested with approximately the same amount of energy as the conscious attitude, and therefore, capable of breaking through the latter's resistance...Active fantasy is one of the highest forms of psychic activity. For here the conscious and unconscious personality of the subject flow together into a common produce in which both are united. (Hull, 1971)

Binet and Janet, in their "method of provoked introspection" (Happich, 1932), developed what they termed a "dialogue method" whereby their patients exchanged verbal dialogue within the visual images which emerged in their "provoked introspection." Binet and Janet believed that images arising from this introspection expressed various unconscious sub-personalities of the patient.

Carl Happich (1922) expanded Binet's early work by encouraging "emergent images" through the use of "muscular relaxation, passivity of respiration, and meditation." He theorized that a "meditative zone" existed between the conscious and unconscious in which "creations ripened in the unconscious appear to the mind's eye." In contrast to Freud's shift from imagery to free association, Happich asserted that it was the experience of imagery from the "meditative zone," not verbal abstraction, which was necessary for personality alterations. Happich's method utilized a variety of predetermined scenes such as a meadow, a mountain, or a chapel as points of departure; derived from his literary and practical knowledge of

Oriental techniques.

In Germany, Kretschmer (1932) elaborated on landscapes suggested by Happich in exploration of their symbolic significance woven into his concept of "meditative techniques for psychotherapy." Kretschmer utilized his technique involving thinking in the form of a movie, which was termed Bildstreifenderken (Assagioli, 1965). Kretschmer introduced intitial images to serve as points of departure, but suggestions of surroundings were intentionally left vague. Personal as well as more universal archetypal imagery was encouraged, leading the client away from the initial image. For Kretschmer, the emphasis on imagery utilization was to evoke symbols which "expose internal psychic problems" into a higher (conscious or supra-conscious) level of awareness. Kretschmer believed that the "art of psychotherapy" relies on the stimulation of the "deeper levels of the unconscious," and can be described by the "unscientific term 'exorcism'" (Kretschmer, 1969).

In the 1940s, Jellinek introduced her technique of "Spontaneous Imagery" in psychotherapy (Jellinek, 1949). Jellinek believed that conflicts at the unconscious levels are eventually experienced consciously via spontaneous imagery, thereby releasing associated energy and affect. Observation by the client of these symbolic occurrences creates personality alterations leading to therapeutic resolutions of intrapsychic disturbance. In her 1949 publication, Jellinek parallels her method of Spontaneous Imagery to the phenomena of dreams. She states:

They are expressions of unconscious material,

> thoughts, fears, wishes, expectations, etc. which clothe themselves in some forms of our real experiences or borrow some of the elements of reality, combining them often in an irrational way, just as dreams do...Symbolism depending upon the subject's personal history, background, and personality, as well as his present situation, are dramatized in imagery, analogous to the happenings in a dream (Jellinek, 1949).

For Jellinek, catharsis is the ultimate therapeutic goal of the "Spontaneous Imagery" technique; she affirms that clients typically emerge from the experience with an "immense feeling of relief of being unburdened" and "being changed and feeling reborn, renewed, and sometimes resurrected."

Schultz (1959) was a European pioneer in the development of imagery techniques who, inspired by Oskar Vogt's work on "autohypnotic" exercises, began work on an approach to self-control and muscular relaxation which ultimately led to his technique of "autogenic" training. This involved the utilization of relatively fixed imagery as a means of facilitating self-control. In many respects, one could call Schultz the "father" of the biofeedback field, in that he was the first to identify, label, and train the client in the personal manipulation of autonomic and cognitive responses.

Schultz instructed patients to suggest to themselves, as well as visualize, that they were experiencing the physiological sensations which he discovered would, in turn, produce the desired physiological state and concurrent levels of consciousness. Schultz and Luthe (1969) developed "meditative exercises" to be followed during what they termed the "autogenic state" of relaxation. These involved "progressive visualizations" from "static uniform colors, to dynamic

polymorph colors, to polychromatic cimerama," or what might be considered the "waking dream." Through this training in relaxation and visualization, the client learned how to sustain and manipulate visual imagery on his own for physical and psychotherapeutic purposes.

A major contributor to European application is Robert Deoille, with his development of the "Guided Daydream." In this practice, therapeutic benefits arise out of involvement in and active exploration of one's own flow of images. Desoille affirmed that it is the journey itself, the very process of exploring the preconscious realm through the succession of images, which is intrinsically therapeutic (Hammer, 1967). Desoille emphasized that the working through of blocks, fears and resistance within the imaginal realm produced symptom relief and significant personality alterations.

Influenced theoretically by Jungian thought, Desoille regarded the "Waking Dream" as a means by which the client could create a meeting with the "collective unconscious." In this manner, the experiencing of collective background of personal conflicts within the larger framework of human difficulties was achieved. Desoille postulated that psychological disturbances were directly resultant of habitual maladaptive cycles which created obstacles to healthier alternatives. By the introduction of new symbols and symbolic modes of movement into the client's "waking dream," the therapist was able to offer "new lines of force," which were alternatives to the client's habitual modes. Desoille emphasized teaching the client how to participate with various "archetypes" and how "to control

them...to be free from them and thereby to lose fear of them" (Kretschmer, 1969).

In Desoille's first treatment phase he observed the client's pattern of imaginal movement. The second phase consisted of deconditioning maladaptive phenomena. Thirdly, he attempted to establish "new and appropriate dynamic patterns" of movement which involved visualization of positive imagery scenes" (Desoille, 1966).

Spatial movement had particular significance for Desoille. Symbolic ascension and descension (i.e., up toward the heavens or down toward the sea) were utilized as a means of exploration, as well as a means of directing imaginal movement. Imaginary descent dealt with issues of depth, i.e., conflict, painful affect, etc. In downward movement, clients often experienced anxiety, fear, darkness, threatening images and associated automatic responses. Desoille associated descension with a plunge into one's personal unconscious. In contrast, symbolic ascension was associated with the more spiritual level of the psyche. In the process of ascending, clients typically reported sensations of euphoria and visions of light which produced feelings of warmth and physical relaxation. In ascension, there was also an increase in "positive" imagery. Movement from left to right was believed to be associated with movement toward the future whereas movement from right to left elicited memories and images from the client's past. Movement among images was a key element of Desoille's technique.

Phenomena deriving from myths and fairy tales was utilized in redirecting a client's imagery. An imaginary threatening figure

might be met with a suggestion that the client see a hand reaching to help, or that suddenly a magic wand appears to produce the desired metamorphoses of images.

Desoille's "Guided Daydream" techniques commences with the client reclining in a semi-darkened room with eyes closed. A progressive relaxation procedure is then employed by the therapist or "guide," followed by suggestions of various scenes that involve alternate ascension and descension in imaginal space. Ascension evokes the individual's higher spiritual and ethical nature, while descension leads the client beneath the earth and sea to encounter images of threatening symbols representative of the client's more primitive unconscious forces.

The following is a list of 6 themes and images Desoille systematized in his "Directed Daydream" for treatment purposes.

	Purpose	Theme
1.	Confronting one's more obvious characteristics.	For male--a sword For female--a vessell or container
2.	Confronting one's more suppressed characteristics.	For both sexes--a descent into the depths of the ocean.
3.	Coming to terms with the parent of the opposite sex.	For male--a descent into a cave to find a witch or sorceress. For female--a descent into a cave to find a wizard or a magician.
4.	Coming to terms with the parent of one's own sex.	For male--a descent into a cave to find a wizard or a magician. For female--a descent into a cave to find a witch or a sorceress.

5.	Coming to terms with societal constraints.	For both sexes--a descent into cave to find the legendary dragon.
6.	Coming to terms with oedipal situation.	For both sexes--the castle of the Sleeping Beauty in a forest.

In Desoille's methodology, the inner journey is initiated by the therapist's specific suggestion of an imaginary situation based on the aforementioned themes. During the journey and succession of imaginary scenes, which may be repeated more than once in a single session, considerable concomitant affective expression is typically evoked. At the close of a session, the therapist ("guide") may encourage the client to hold the sword up to the sunlight and then report what occurs, or for a woman, to hold up her vessel and observe what pours down from the heavens. The client is then encouraged to rest and enjoy the view of the closing scene and to feel a sense of accomplishment and satisfaction in completing the journey. For homework the client is urged to write out a full account of the experience and to bring it to the next session for analysis. Further imagery case history material is also explored.

It seems apparent that in Desoille's technique most of the therapeutic tasks transpire while encountering confrontations with threatening, negative, or conflictual symbols during the course of the descension themes. Obstacles and fearful or anxiety-producing symbols are encountered at the symbolic level, which eliminates active resistance by the client. Interpretation of actual figures is only made once the client gains a sense of mastery in his ability to face and confront the threatening symbol representative of the

relational or conflictual situation. This is illustrated by Desoille's example of a client who meets a monster in an underwater grotto. The therapist encourages the client to ask the monster for a tour of the grotto, and then to bring the monster back to the beach with him. The client is then encouraged to tap the monster with a magic wand which he is given to turn the monster into an octopus. Once this is accomplished, his true identity, which is personally significant to the client, will be revealed.

It is important to note that Desoille's "Guided Daydream" technique serves as a desensitization procedure in which the client must confront frightening symbols or persons, and is encouraged to remain in their presence while containing associated anxiety and maintaining, as well as possible, a relaxed state. The therapist emphasizes the support of the therapeutic alliance, thereby reinforcing strength, courage, and faith in the client's ability to encounter what awaits him.

A closely related but somewhat more structured and formalized approach than Desoille's is that of Leuner's (1969) "Guided Affective Imagery" technique. Therapy involves relaxing the client through a formal procedure and reducing as much external stimulation as possible. The client is postured in a semi-reclining or reclining position with eyes closed. Through the use of "catathymic imagery," inner visions are evoked, producing related affect and emotion of specific significance to the client. Leuner maintains that a more formal psychoanalytic analysis of imagery material is not essential, as many disturbances can be worked through at

pre-conscious levels via symbolic combat or amelioration through intervention.

With this approach Leuner was able to train patients to release their imaginations (particularly effective for those who tended toward over-intellectualization or naivete), diagnose clients via a process he termed "Initiated Symbol Projection" (ISP), and do both short-term and intensive psychotherapy.

Leuner (1969) employs ten standard imaginary situations as follows: (1) the image of a meadow--representing a new beginning, the Garden of Eden, or the nature of the mother-child relationship; (2) ascending a mountain, then describing the view and related affect--representing the client's feelings about his own competence, opportunities for success, and indicative of levels of aspirations; (3) following a brook upstream to its source or down to the ocean--representing a symbolic visit or return to the mother-child relationship (Cool water imagery usually has a reviving or analgesic effect for the client); (4) detailed exploration of a house--representing symbolically the client's personality; (5) visualization of a close relative--images often emerge in symbolic forms; (6) visualization of scenes designed to elicit sexual feelings and behavior (for females, being offered a ride by a man in a car on a lonely road; for males, visualizaing a rose bush); (7) visualizing a lion--representing the client's own aggressive tendencies; (8) imagining a person of the same sex--representing the client's ego ideal; (9) waiting for a figure to emerge from a cave or dark forest--representing potentially frightening symbolic figures

emphasizing confrontation; (10) imagining a swamp out of which a frog, snake, human figure, or other creature will emerge--representing one's primitive and sexual nature (typically anxiety provoking).

Each theme is generally expressed so that a client can project his own fantasies into it. When used for therapeutic purposes, each scene is delved into carefully, allowing ample time for the client to become integrated into and responsive to the imagery and related affect which emerges. Using the technique for diagnostic purposes, the therapist "guides the patient quickly through a variety of imaginative situations" in order to obtain a "wealth of imaginative content" (Leuner, 1969). Initiated Symbol Projection (ISP) takes one to three sessions and progresses with particular attention to the following points: (a) the qualities of the different situations traversed; (b) factors that inhibit progress on given tasks; (c) noticing incompatible situations (i.e., two seasons occurring simultaneously, or a refrigerator lacking food); (d) the nature of the emerging symbolic figures and their behavior.

Within the "Guided Affective Imagery" procedure, Leuner formulated five major techniques for evoking imagery material. These include:

(1) The Training Method

Exclusively introducing the first three imaginary situations.

(2) The Diagnostic Method

This consists of the "Initiated Symbol Projection" technique (ISP)

While adopting many of Desoille's techniques, Fretigny and Virel, a psychiatrist/psychologist team, focused more systematically on the parameters of the imaginary process with greater emphasis on general psychotherapeutic orientation. In their use of the term "oneirotherapy," they sought to distinguish between the very specific "guided daydream" method of Desoille and techniques oriented around the use of intermediate states between wakefulness and sleep. Of particular interest was their classification of various types of mental imagery in relation to different levels of consciousness.

Fretigny and Virel began treatment by taking an extensive case history and were concerned with family background, psychosocial factors, and physiological and psychological development. Considerable attention was given to evidence of resistance on the part of clients and a more psychoanalytic position was embraced than that of other clinicians utilizing imagery application.

For Fretigny and Virel, the central figure of their mental imagery technique is what they term the "oneirodrama," which involves a vivid and dramatic confrontation through imagery of the client's critical difficulties. Repeated confrontations lead to significant abreactions which afford the opportunity for reintegration of experiences into the client's adult role. Virel and Fretigny also experimented with a variety of psychoactive drugs and found that small doses of LSD effectively facilitated affectivity, imagery production, and the lowering of defenses.

Sessions involve relaxation procedures and initiation of a sym-

(3) The Method of Associated Imagery

This method encourages the client to link symbolic GAI experiences with both past events and current life situations

(4) The Symbol Dramatic Method

This is the core foundation of Leuner's model consisting of the following six techniques which have special therapeutic benefit:

(a) the intrapsychic pacemaker--a method of giving the client control by allowing him to create his own animal or figure guide.

(b) confrontation--a form of systematic desensitization.

(c) feeding--a method for client to mollify frightening creatures.

(d) reconcilitation--with hostile figures or creatures which emerge in imagery.

(e) exhausting and killing--utilized (cautiously) with hostile forces.

(f) the magic fluids--fluids which adopt magical qualities, i.e., fresh water, cow's milk, rainfall.

(5) The Psychoanalytic Method

Chains of association to various images are encouraged. Leuner believed that this method is particularly useful when the client is unable to recall dreams or if there is a persistent resistance.

The various European approaches to the clinical application of imagery have been classified under the heading of the "Oneirotherapies" by two of the leading European contributors in the field, Fretigny and Virel. "Oneirotherapy" comes from the Greek word meaning dream and refers to the range of imaginative states from sleep to daydreaming, as well as to waking imaginative thought under conditions of reduced arousal or relaxation (Watkins, 1976).

While adopting many of Desoille's techniques, Fretigny and Virel, a psychiatrist/psychologist team, focused more systematically on the parameters of the imaginary process with greater emphasis on general psychotherapeutic orientation. In their use of the term "oneirotherapy," they sought to distinguish between the very specific "guided daydream" method of Desoille and techniques oriented around the use of intermediate states between wakefulness and sleep. Of particular interest was their classification of various types of mental imagery in relation to different levels of consciousness.

Fretigny and Virel began treatment by taking an extensive case history and were concerned with family background, psychosocial factors, and physiological and psychological development. Considerable attention was given to evidence of resistance on the part of clients and a more psychoanalytic position was embraced than that of other clinicians utilizing imagery application.

For Fretigny and Virel, the central figure of their mental imagery technique is what they term the "oneirodrama," which involves a vivid and dramatic confrontation through imagery of the client's critical difficulties. Repeated confrontations lead to significant abreactions which afford the opportunity for reintegration of experiences into the client's adult role. Virel and Fretigny also experimented with a variety of psychoactive drugs and found that small doses of LSD effectively facilitated affectivity, imagery production, and the lowering of defenses.

Sessions involve relaxation procedures and initiation of a sym-

bolic image by the therapist. Thereafter, the client's imagery is allowed to unroll as freely as possible. The following is an outlined sequence of the treatment process:

(1) Formal relaxation procedure.

(2) Training in translating images into words.

(3) Facilitation of spontaneous imagery; thereby precluding standardized triggering of images.

(4) Active participation of the client within his visualization rather than merely viewing it.

(5) Dramatization is dynamic; evolution of imagery is constant and builds to a breaking point.

(6) Categories of sensitivity are utilized (i.e., cold-hot, light-dark) representing anxiety--security or revelation uneasiness.

(7) Oneirodramas often result in abreaction, which is viewed as appropriate only at the end result of a progressively structured imaginary dramatic situation, which facilitates a de-dramatization involving closure.

Treatment consists of three phases: (1) anamnesis, dialogue, analytical interpretation; (2) oneiric phase which involves engaging in the oneirodrama or waking dream; (3) maturational phase (between sessions the client records his oneirodrama, tests and uses his insights in his life, and works on any "homework" the therapist gives (Watkins, 1976).

Virel (1968) believes the "fundamental imagery pattern of the individual is partially idiosyncratic in the sense of its relationship to family experience, partially shared with others of the same sex by virtue of constitution and partially collective in the sense of commonality of culture and the emergent expression of man's

primal development" (Singer, 1971).

Although there was much conflict among European clinicians on the degree of directiveness necessary in imagery therapies, most generally agreed that some structure was mandatory, particularly in providing a "meaningful" scene in which the client initially projects himself. Other variables requiring consideration involved the severity of disturbance, the client's capacity for image manipulation, and therapist preference for the use of spontaneous imagery. Singer (1971) states: "Fantasy-life symbolism really seems <u>there</u> for most of the European therapists; it is not merely a reflection of conflicts but a fundamental part of the personality that may require treatment and modification."

All European Oneirotherapies shared similarities in that: (a) clients were taught to regain their ability to observe their imaginations; (b) therapists encouraged clients to enter into and participate within their fantasies which permitted dialogue to occur between ego and arising images; and (c) therapists sought to make suggestions to clients as to how scenes could be more effectively entered into with regard to facilitating learning, resulting in therapeutic change.

In contrast to the European approaches, behavior therapies sought to focus on the direct symptom presented by the client precluding underlying symbolic content. One of the most widely used behavior modification techniques which relies on the client's production of covert responses, i.e. images or fantasies, is Wolpe's (1958) Systematic Desensitization Technique.

In the initial stage of therapy, a hierarchy of scenes based on a detailed client report is established in terms of increasing gradations of anxiety provocation. Desensitization involves training in extensive relaxation (similar to the directed fantasy techniques), which facilitates increased capacity for imagery production under conditions of minimal anxiety. The therapist then directs the client to imagine one of the scenes from the previously constructed hierarchy of anxiety-producing images. Repeated imaginal reconstruction of the scene under relaxed conditions lessens the probability that the client will experience anxiety when spontaneously encountering the scene thereafter. Increasingly anxiety-provoking scenes are presented, as those lower in the hierarchical ranking lose their anxiety-arousing potential. Treatment ultimately terminates once the client reports no anxiety from the most feared scene in the hierarchy.

The relaxation phase is a key feature of the Desensitization procedure. It establishes a lowered arousal level in which the images of anxiety-producing scenes occur without experiencing previously concurrent anxiety. The Desensitization procedure differs from other imagery techniques previously cited in that relaxation is utilized primarily to facilitate the production of imagery material.

Original application of Desensitization procedures was specifically geared to treatment of phobias, although Wolpe and colleagues have extended the use of this technique from treatment of classical phobias to treatment for a variety of social behaviors.

Studies by Paul (1966) evidenced considerable improvement in treatment of clients with fears of public speaking by presenting a graded series of increasingly anxiety-provoking public situations. Lazarus (1960) utilized this technique with clients evidencing separation anxieties and aggressive behavior through the use of gradated hierarchical scenes eliciting associated affect.

Weitzman (1967) compared Gendlin's (1969) Focusing method with Wolpe's Desensitization procedure and found there was considerable production of client imagery evoked during the desensitization processes. He believed that the critical therapeutic feature was the emotional experience associated by the client with ongoing imagery.

Singer (1971) states:

> It can be conjectured that the patient not only has the advantage through the production of his imagery of perhaps a deconditioning or learning of new response patterns through symbolism, but also of an experience of control over proceses he may have been hesitant to develop in the past. The process of manipulation of imagery is not often recognized as available to them by many people. To the extent that the patient gains some awareness of his capacity for self control of imagery, he may experience an enhancement in self-esteem, as well as improvement in his ability to confront a frightening situation.

A variant of the Desensitization procedure intended to intensify the counter-conditioning impact was developed by Lazarus and Abramovitz (1962). In addition to creating a hierarchy of frightening images, the client generates scenes that are clearly positive in nature, i.e., images associated with happy, relaxed, or peaceful

moments in one's past. Immediately after imagining a scene from the anxiety hierarchy, the client shifts to one of his positive images.

This method is similar to the one employed in Chappell and Stevenson's very successful earlier study (1936), where treatment involved training clients to become aware of their bodily processes and to utilize positive imagery by thinking about pleasant life experiences whenever they became aware of feeling anxious. The relationship of positive imagery and affect is discussed by Tomkins (1962; 1963):

> ...the procedure used the relaxation method, then developed for the patient very strong positive images that could be used to further enhance relaxation, and finally systematically juxtaposed the increasingly frightening hierarchy items with the positive imagery developed by the patient. Speaking generally of the positive images which the patients produced, they were linked to nature scenes with numerous references to lying on quiet beaches and watching the waves of the ocean or lakes, being in peaceful woods, or watching the snow fall on a pleasant hillside. These positive images generally were not self-involving... (Tomkins, 1962).

Another behavior modification technique which relies heavily on imagery utilization is Stampfl's (1967) Implosive therapy. In this technique psychodynamic themes are explored as the client vividly imagines the worst possible series of scenes involving consequences of fear-relevant material. As the client imagines these scenes, high levels of anxiety are evoked. Since no actual consequences of the imaging follow, the original fear and concomitant anxiety are extinguished. Implosive therapy commences with detailed

exploration of the nature of the phobia or fear-relevant scenes to be treated, followed by vivid imagery practice utilizing noxious imaginal consequences of the fear. The therapist encourages the client to act out the material as dramatically as possible, with as full affective expression as possible.

A variant approach, Rachman and Teasdale's concept of Flooding (1969), elicits the imaginary reconstruction of numerous frightening anxiety-producing scenes, excluding the specific imaginary involvement of the client. Relaxation training is not required. Through repeated sustaining of the various anxiety-provoking scenes for prolonged durations, and "containing" of high levels of anxiety response, the anxiety eventually becomes extinguished over the course of repeated imaginings. Flooding has often been referred to as "cold-turkey extinction therapy" and requires much perseverance on the part of the client.

In contrast to the European clinicians, who focused on symbolic content and underlying meaning of the imagery, American clinicians emphasized the direct relevance to the symptom evidenced. Imagery is viewed as an implicit response and does not unfold and permeate the therapy as it does in the European imagery technique approaches. Relaxation and systematic training in imagery production is validated, and there is emphasis on the use of imagery as a self-regulating approach which frees the client from dependency in the therapeutic relationship.

Singer adeptly highlights the utilization of desensitization and aversive imagery techniques drawn from his own clinical experi-

ence:

> The patients are often surprised at the complexity of their imagery but also at the degree to which they can begin to control it and use it (as in aversive imagery or positive image substitution) to control their moods or compulsions. If one's own ongoing stream of thought can be viewed as a stimulus field, the better acquainted one is with it and the more adept at shifting into new imagery, the less likelihood there is for terror at odd or aggressive thoughts. There is also greater likelihood that one can use reminiscence or anticipation of familiar scenes associated with joy or positive affect to change one's mood during moments of fear, depression, or boredom (Singer, 1971).

Treatment of Post Traumatic Stress Disorder with Imagery Application: Current Research

Although much has been written in the past decade on Vietnam veterans evidencing Post Traumatic Stress Disorder, there is a relative paucity of literature addressing treatment of the imagery-related symptomatology; i.e., intrusive daytime images, memories, flashbacks, and recurring nightmares.

Research addressing the treatment of the imagery-related symptom cluster appears to utilize two closely related treatment modalities, those based on Rachman and Teasdale's Flooding procedures and Wolpe's Desensitization method. Fairbank and Keane (1982) and Keane and Kaloupek (1982) demonstrated that after treatment with imaginal flooding therapy, both physiological arousal and subjective resports of anxiety were reduced during the presentation of traumatic imagery scenes.

In their 1983 study, Fairbank, Gross, and Keane investigated the effects of a nine session imaginal flooding procedure in a single subject design. The subject was a Vietnam combat veteran who was the sole survivor of a squad that was ambushed on patrol. During the traumatic event, the subject was seriously wounded (which resulted in amputation of a leg) and, while hidden from view, he helplessly observed the enemy torture, kill, and mutilate a good friend. For eleven years subsequent to this trauma, the veteran experienced intrusive memories of the ambush in terrifying nightmares and flashbacks.

Treatment consisted of autogenic-type relaxation procedures at the beginning of each session, followed by a subject-selected pleasant imagery scene. Following the relaxing imaging, imaginal flooding was initiated with imagery cues relevant to the traumatic event slowly and gradually presented by the therapist, until each chronological event in the sequence was introduced. The subject was encouraged to maintain the anxiety related aspect of each image as long as possible. The flooding procedure lasted 60-70 minutes per session. Following the flooding procedure, relaxing imagery was re-introduced and sessions were concluded with client/therapist discussion of the experience.

Results indicated that the subject reported "considerable anxiety reduction following a session," and that "decreased overt arousal across flooding sessions was directly related to changes in outcome measures, such as decreased number of combat-related nightmares and decreased number of intensity of symptoms of depression and

PTSD" (Fairbank et al., 1983).

Fairbank and Keane (1982) investigated flooding treatment for PTSD focusing on the extent to which the extinction of anxiety to one traumatic memory generalizes to other memories. This is especially pertinent to PTSD in Vietnam veterans, as the likelihood of several traumatic events occurring in the combat situation is high. In this study, the subject experienced three traumatic events in Vietnam which manifested in flashbacks and nightmares.

Traumatic scenes were selected based on the following criteria: The subject reported that (a) scenes were based on actual events; (b) thinking about or discussion of the event with other had been avoided; (c) memories of each event intrusively manifested in nightmares and/or flashbacks; and (d) an increase in anxiety was elicited with the description of each traumatic event (Fairbank & Keane, 1982). The subject also rated each scene using a 10-point SUDS (subjective units of distress) scale (1 = no distress, 10 = extreme distress).

Treatment involved relaxation exercises and presentation of a subject-selected pleasant imagery scene. This was followed by therapist presentation of the focus scene of traumatic events randomly presented. Stimulus cues based on descriptive details of each scene included cues across all sensory modalities (i.e., visual, auditory, olfactory, and tactile aspects of the traumatic event). After each scene the subject was directed to switch to 5 minutes of therapist controlled relaxation and pleasant imagery before the next traumatic scene was presented.

Results indicated that the flooding procedure was significantly successful in that the subject reported considerable anxiety reduction following a session. One year follow-up indicated that the client had successfully completed a training program, obtained employment, and was involved in a satisfactory interpersonal relationship. Investigators hypothesized that generalization of extinction effects would only occur as a direct function of the degree of stimulus cue overlap. The research findings of this study concur in that: "data suggest that anxiety extinction to one event may generalize to similar events, but remain independent of anxiety associated with dissimilar traumatic memories" (Fairbank & Keane, 1982).

Of the PTS imagery-related symptom cluster, nightmares and recurring dreams are the sole symptomatology even minimally addressed by treatment of Systematic Desensitization.

Schindler (1980) investigated the novel use of systematic desensitization in the treatment of recurring nightmares of a real-life traumatic event. His case study involved a Vietnam veteran who vividly re-experienced a traumatic combat event which manifested in a recurring nightmare.

Therapy was initiated with compilation of a detailed account of the nightmares which revealed that the subject observed the virtual disintegration of a fellow soldier who had stepped on a mine. Since the event, nine years previously, the subject re-experienced the traumatic event in dream content relatively unpredictably, although at least once a month.

High expectation for success was included in the description of therapy based on Leitenberg, Agras, and Barlow's (1969) research findings that "therapeutically oriented instructions and selective positive reinforcement can enhance the beneficial effects of systematic desensitization therapy."

A progressive relaxation technique was then implemented, in conjunction with a subject-selected pleasant imagery scene to facilitate relaxation. A seven-stage hierarchy was assembled based on lowest to highest levels of anxiety evoked by scene. For this subject, the chronological progression of events in the dream created the hierarchy. Therapy consisted of five biweekly sessions of approximately 30 minutes duration, via traditional desensitization. Self-administered desensitization at home was also utilized as a means of coping with future dream anxiety. Follow-ups conducted at three and seven months post-treatment revealed no disturbing recurrence of the dream.

Geer and Silverman (1967) provided the first published report of the successful treatment of a recurrent nightmare using a modified version of systematic desensitization. The client reported experiencing the same recurrent dream three to five times per week for approximately fifteen years. Successive segments of the nightmare involving violent attack were incorporated into a hierarchy and the client was directed to say to himself: "it's just a dream" when feeling anxious. Therapy was terminated when the client reported that he no longer experienced the dream. Therapy consisted of a total of thirteen sessions. A three-week and a six-month

follow-up revealed no re-occurrence of the dream, nor any evidence of any form of symptom substitution.

Subsequently, Silverman and Geer (1968) reported the eradication of a falling nightmare by desensitization treatment, and Cautela (1971) also utilized short-term desensitization procedures with significantly successful results in treatment of disturbing dreams.

The efficacy of systematic desensitization in treatment of recurrent dreams and nightmares is evidenced by existing research. Whether or not the success of desensitization treatment can be generalized to other imagery-related symptomatology within the PTS framework remains to be explored in this investigation.

Predictions

1. It is predicted that, from pretest to posttest, both the Relaxation and Imagery Groups would have shown significant reduction in imagery-related symptomatology on each of the following measures:
   a. The Imagery Assessment Questionnaire, which assesses the:
      1a. Intensity of imagery symptomatology associated with PTSD
      1b. Frequency of imagery-related symptomatology
      1c. Duration of imagery-related symptomatology
   b. The Vietnam Era Stress Inventory (VESI) Part IV, Post-Vietnam Stress Symptomatology

c. The PTSD Symptom Checklist

2. It was predicted that, from pretest to posttest, the Imagery Group would have shown significantly more improvement than the Relaxation Group on each of the dependent measures listed above.

CHAPTER II

METHOD

Subjects

The subjects who participated in this study were 14 Vietnam veteran inpatients on the Post Traumatic Stress Unit at a Northeast Veteran's Administration Medical Center. Veterans were diagnosed as experiencing Post Traumatic Stress via the unit's interview and screening procedure prior to admittance to the unit. Subjects ranged in age from mid- to late-30s. The subject population consisted of 12 white, 1 Black, and 1 Hispanic veterans. Subjects were of predominantly lower and middle class socioeconomic status. Volunteers were restricted to those whose native language was English.

Initially, the experimenter hoped to randomly divide the veteran population into two groups: the Relaxation Group and the Imagery Group, while running both groups concurrently over an eight week period. During the recruitment phase, it quickly became apparent that due to attrition there were insufficient subjects available to run both groups simultaneously. Veterans who withdrew from the study seemed particularly disturbed about being required to complete questionnaires pertaining to their Vietnam experiences, and complained about being "guinea pigs" for a study. Several subjects withdrew upon being faced with "having to sign" the Patients'

Right contract, refusing to sign any document despite the content of the contract which was clearly protective of the veteran. Paranoia, suspiciousness, and negative attitudes were quite strong for those veterans who felt that once again (as in the Vietnam War) "the system" was going to victimize them by recruiting them into "another meaningless farce," as one veteran expressed it. For the overwhelmingly negative, hostile and paranoid veterans who dropped out of the study during the pre-briefing phase, there specifically seemed to be several aspects of participation which triggered the negative responses. The completion of questionnaires were viewed with extreme suspicion, regardless of the anonymity involved. Relinquishing personal information to an "outside" authority figure triggered feelings of powerlessness, mistrust, and resultant paranoia. Request for their signatures on any documents, regardless of the content (in this case the patients right forms) elicited inappropriate responses to the situation. Several veterans who withdrew requested that I return to them the patient rights forms which they had signed, so they could personally destroy the documents in my presence. One of the veterans who withdrew stated: "You seem okay, but why should I trust you? Who knows who you'll turn the information over to?" The veterans were also extremely hesitant about disclosing Vietnam-related imagery, either in anonymous questionnaire format or to me personally. One veteran stated: "There's something that happened that tortures me every minute of every day--when I'm awake or when I'm asleep. This has been going on for 17 years, and I can't tell anyone about it--not even a priest. They'd

put me in jail and throw away the key." In sum, there was tremendous fear of recrimination (despite reassurances) which manifested in overt hostility toward myself and the study.

The veterans who participated in the study had similar fears and reservations but were not as suspicious regarding my motivations and intentions. Most of the veterans felt they were "willing to give anything a shot" that might potentially reduce their Vietnam imagery-related symptomatology.

In view of the difficulties involved in obtaining volunteers for the study, it was necessary to stagger treatment groups, starting the Relaxation Group with available participants. There was a three-week waiting period until additional veterans were admitted to the unit and the Imagery Group was begun. The veteran subjects from both the Relaxation and Imagery Groups were accepted from the identical pool of veterans diagnosed with PTSD from the unit's waiting list for admittance to the program.

Although there were initially 20 interested and available participants for this study, nine subjects were lost prior to and during the initial pre-briefing sessions due to veteran sentiments regarding experimentation in general and the signing of Patients' Rights forms in particular. Out of the remaining eleven subjects available, three withdrew during the Assessment period. The Relaxation Group commenced with the remaining eight subjects. One subject withdrew during the second week of the Relaxation Group, leaving seven subjects who completed the Relaxation program.

There were eleven subjects interested and available for parti-

cipation in the Imagery Group. Two subjects withdrew prior to and during the pre-briefing phase, leaving nine available subjects. One subject withdrew during the initial session utilizing desensitization procedures (fifth week) and another subject withdrew from the entire PTSD program during the seventh week of the treatment program. There were seven remaining subjects who completed the Imagery program.

Experimenters

One experimenter and one research assistant were involved in this study. Both experimenter and research assistant were present during Relaxation and Imagery Group sessions. The research assistant was a staff member (mental health associate) who was available to the subjects to answer questions and to deal with any veteran difficulties which might arise pertaining to the study.

Measures

Pre- and post-test measures were assessed via the following instruments based on the two-week period prior to the testing situation. This was done in order to have the time reference comparable for the pre- and post-assessment periods.

Information Sheet: Demographic information recorded included name, age, race, educational background, as well as employment, marital

status, and military status.

The Imagery Assessment Questionnaire was designed to delineate the specific imagery-related symptomatology (intrusive imagery, nightmares, flashbacks) experienced by the veteran in terms of intensity, frequency, and duration. The IAQ also assesses level of relaxation and ability to control imagery symptomatology.

The Vietnam Era Stress Inventory (VESI) (Wilson, 1980). The VESI contains a set of questionnaires (which may be utilized in individual sections) and is designed to assess the experiences of the Vietnam veteran. Part III assesses exposure to specific stressors in Vietnam and Part IV assesses post-Vietnam stress symptomatology. Wilson and Kraus (1984) have reported a construct validity based on factor analysis. Both Parts III and IV were included as assessment instruments.

The PTSD Symptom Checklist, devised by the Post Traumatic Stress Unit at the Northampton VA Medical Center was also utilized to assess current stress-related symptoms.

Procedure

Recruitment

Subjects were recruited by meeting with the experimenter at a designated time in a group format. After introductions, the following was stated to the veterans:

> I'd like to tell you a little bit about two groups that I'll be offering on this unit as part of a study on Post-Traumatic Stress. The study is about treating symptoms that involve images or pictures in your mind about Vietnam that are painful or disturbing to you. These include daytime images of Vietnam which sometimes repeat over and over in your mmind, nightmares about Vietnam, and flashbacks about your Vietnam experiences. My goal in working with you is to try to help you lessen the Vietnam images, nightmares, or flashbacks you may be experiencing and also, hopefully, to lessen the intensity of the experiences when and if you continue to have them.
>
> This program will get going through your voluntary participation in either a Relaxation or Imagery Group. There are a number of things you need to know before volunteering for this study.
>
> 1. Confidentiality is assured. Your names will not appear on any information I gather from you. Research numbers will be assigned to you to protect your privacy. No information will be released or in any way affect disability compensation.
>
> 2. Again, your participation is voluntary and you can withdraw at any time. If you do withdraw, it won't in any way affect the rest of the treatment you're getting in this program.
>
> 3. I can't guarantee any of the results of participation in this study. In other words, I can't say to you, you'll definely get better from your participation in one of my groups.

Here's what the study will involve:

First, I'd like to meet individually with each of you who sign up (a sign up sheet will be available). We'll meet for an hour and talk about the kind of problems that you've been having that involve painful images about Vietnam, nightmares you've experienced, or flashback episodes you've had related to Vietnam.

After I've seen everyone individually, we'll meet for approximately two hours in a group to complete questionnaires about your experiences of these symptoms. All questionnaires will be anonymous; only your research number will be on them, not your names.

You'll be assigned to either the Relaxation or Imagery Group. Groups will meet twice a week for one and one-half hour sessions in the evening. Groups will run for eight weeks. We'll also meet for another individual session during the fourth week so I can touch base with each of you privately. Some of your Vietnam experiences may be uncomfortable to talk about. I know they're very personal and sometimes very painful. You'll always be free to discontinue our talk and, of course, tell me only what you want to. After the groups are over, I'm going to wait two weeks and give you the same questionnaire again, which we'll do at a group session. You'll also have a last individual session with me so I can give you as much feedback as possible on your participation and progress in the study. At any point during the study, if you feel at all disturbed by anything, please let me know and we'll be able to talk about it and decide what to do. The staff on this unit is very supportive of this work, and you'll always be able to talk to any of the staff if a problem or a concern arises.

Veterans responded by raising questions about the value of the groups and whether they were being "used" as guinea pigs for untested treatment. Other veterans seemed very excited about the prospects of decreasing or eradicating symptoms which had plagued

them for years. The majority of veterans questioned me about my background, with particular interest in my affiliation with the VA and outside VA sources such as Disability Committees. Heavy emphasis was placed upon the fact that I had previously worked on the unit with several veterans who were known to these veterans. In general, there was a strong mixture of suspicion, as well as attempts to validate "who I was" by the veterans. What was strongly evident was the split that the veterans had created between those who could be trusted (typically other Vietnam veterans) and those who couldn't, which usually included everyone else until proven otherwise.

Pre-briefing Interview

During this initial individual interview, subjects were asked to describe generally their difficulties with Vietnam imagery-related symptomatology, and how they were affected by it. They were also asked which imagery experiences they most wanted to change. Most veterans were able to describe their experiences quite vividly and for the most part appeared receptive to these questions. The veterans were also asked about what they like to do to relax, as well as to tell me about a relaxing scene (e.g., of nature, etc.) that appealed to them. Difficulties did not arise in these interview sessions until the Patients' Rights forms required their signatures. Some veterans felt that they did not want to have any record of their involvement in this study that would be entered into their files. These veterans felt that if "some government

person" knew they had participated, questions would be asked of me regarding their personal involvement in certain Vietnam experiences. Some veterans withdrew from the study (despite reassurances) immediately, others wanted time to "think about it." Veterans who became participants had few or no reservations about signing the forms, once they carefully read them. Particularly striking were two veterans who wanted time to "think about it." It was evident that they went through tremendous emotional turmoil in their indecision regarding participation. One veteran tearfully described his feelings when he stated that he felt he was being "torn in half." "One part of me wants to do it--even if there's just a chance that I'll get the blood (images) out of my mind, but the other part of me just can't trust you." It quickly became apparent during the recruitment pre-briefing phase that additional Post Traumatic Stress symptomatology (i.e., relational difficulties) were an impeding force in veteran participation.

Testing Situation

Due to an insufficient subject population, it became apparent that the study would require staggered treatment groups. This necessitated four testing situations: two pre-treatment for Relaxation and Imagery Groups, respectively, and two post-treatment.

Pre-treatment assessment for relaxation group. A two and a half hour block of time was scheduled on the unit for completion of questionnaires. Assessment was completed in group format to obtain baseline measures. Questionnaire directions were reviewed

with the group prior to completion and subjects were reminded to base their answers on the two-week period prior to the assessment as indicated on the questionnaires. The experimenter remained in the room for the duration of the assessment period. The subjects' questions during this period were only pragmatic in nature. The veterans completed the measures in the following sequence: Information Sheet, Imagery Assessment Questionnaire, the PTSD Symptom Checklist, the VESI, Part IV, concluding with the VESI, Part III. Three subjects withdrew from the study during the testing situation, expressing anger at being asked questions pertaining to Parts III and IV of the VESI. Several of the remaining participants expressed verbally anger while completing Parts III and IV of the VESI, but remained in the testing situation, and completed the questionnaires. All of the remaining subjects in this initial pre-testing situation were participants in the Relaxation Group.

Pre-treatment testing situation for imagery group. Assessment procedures for the Imagery Group were identical to those described for the Relaxation Group. At the time of the testing situation, there were nine subjects committed to participation in the Imagery program. As in the previous assessment situation, several of the veteran subjects made disparaging remarks regarding Parts III and IV of the VESI. There were, however, no withdrawals of participation during this phase.

Post-treatment testing situations. Post-test assessment periods were held two weeks post-treatment for each of the treatment groups. Interestingly, both post-test assessment situations for

the Relaxation and Imagery Groups were met with noticeably less overt hostility regarding questionnaire completion than during either of the pre-treatment testing situations. Several factors may account for this: (a) the veterans who had vehemently objected to the questionnaire information requested had already withdrawn from the study; (b) the veterans had completed their respective programs, having greater familiarity and, therefore, trust in my motivations; (c) the post-test assessment was identical to pre-test assessment sans the VESI Part III. The veterans therefore knew what to expect.

The Relaxation Group

The Relaxation Group ran for eight consecutive weeks, consisting of semi-weekly sessions totaling sixteen sessions. All sessions were scheduled in the evening, ran for one and a half hours per session. The Relaxation Program was utilized for all treatment sessions which were identical in content and format. During the fourth week of the study, a one and one-half hour individual session was held for participants to "touch base" with the experimenter for the purpose of obtaining aid in revising one's "Ideal Scene" (pleasant imagery scene) to better suit the individual subject's needs. The Relaxation Group commenced with eight veteran subjects (with one withdrawal during the second week of the program), leaving seven remaining subjects. The experimenter and research assistant were present during all group sessions.

The Relaxation Group began three weeks prior to the Imagery

Group, during the participants' fourth to fifth week of involvement in the PTSD Program. The Relaxation Group program is outlined in Appendix F.

Imagery Group

The Imagery Group ran for eight consecutive weeks, consisting of semi-weekly sessions totaling sixteen sessions. All sessions were scheduled in the evening and ran for one and one-half hours per session. All sessions began with the identical relaxation program (utilized in the Relaxation Group) and was followed by Imagery Training, which included a Systematic Densensitization Procedure during the latter phase of the Imagery Group.

During the fourth week of the study, a one and one-half hour individual session was held with the experimenter to construct scene hierarchies to be utilized in the desensization process. Two scenes involving intrusive imagery were chosen by the subject which elicited a range of anxiety levels during deliberate imaginings of scenes.

An anxiety scale of 1-10 was employed (with 1 representing no feelings of anxiety aroused, to 10, which represented the highest possible level of anxiety the subject could experience. During this one and one-half hour long session, "Safety" scenes were also constructed in the event that anxiety levels during the desensitization procedure became intolerable. These "safety" scenes were viewed as a secondary precautionary measure to the "Ideal Scene." The Ideal Scenes were the standard alternating scenes veterans were

instructed to imagine after visualizing the imagery scenes undergoing desensitization. Safetey Scenes were to be employed only if anxiety levels became overwhelming.

The Imagery Group commenced with nine veteran subjects (one withdrew during the fifth week of the group; one withdrew from the entire PTSD program during the seventh week of the study, leaving seven remaining subjects). The experimenter and research assistant were present during all group sessions and were the only non-participants present. The Imagery Group began three weeks subsequent to the commencement of the Relaxation Group, during the subjects' third to fourth week of involvement in the PTSD program.

The Imagery Program consisted of the Relaxation Program in conjunction with the Imagery Training Program and Desensitization procedures outlined in Appendix F.

Debriefing Interview

Following post-treatment assessment individual sessions were scheduled for debriefing. Participants were given as much feedback as possible regarding their participation and progress in the group. Veterans were asked about their experiences in their groups and most of the veterans stated that they gained knowledge or insight during this training that they had not previously had. Although many veterans were disappointed that they were still not freee of their imagery symptomatology, some stated that they seemed better able to "control" the imagery experiences to a greater or lesser degree. Many of the veterans felt they had learned how to relax

somewhat better through learning the relaxation program, and wanted to continue the relaxation program on their own. Several veterans felt they hadn't learned much by their involvement in the study, but felt it had been an interesting experience. Others were angry with me for not "curing" them. Significantly striking was the positive change in veterans' overall attitude towards the experimenter, towards involvement in the study, and towards assessment completion. Only one veteran (from the Imagery Group) stated during debriefing that he still resented having to complete the questionnaires. He quickly hastened to add that it had "nothing to do with you, personally, I trust you and everything, I just don't like thinking about it all." Several veterans from both treatment groups evidenced dependency and separation issues regarding termination of the treatment groups. Several veterans wanted to initiate a petition to have the groups (and myself) continued on the Unit as an integral part of the Unit's therapeutic program. These veterans were primarily those who seemed to gain some distinguishable changes in their imagery experiences, although tentative, and to a limited degree. They felt that greater changes would become evident had the treatment programs been ongoing for a greater length of time.

CHAPTER III

RESULTS

After a brief presentation of demographic characteristics of the investigation's subjects, the Results Chapter will then present data on the reliability of each of the scales used in the study. The next section will systematically test each of the hypotheses of the study using these scales as the dependent measures.

Finally, there is a presentation of a series of correlations which are used as a basis for interpreting aspects of the primary results as well as providing additional insights into the meaning of the scales.

Summary of Demographic Characteristics of the Investigation's Participants

Table 1 presents the demographic characteristics of the participants. Overall, the subjects in the two groups appear to be similar on the various characteristics noted in the table.

The majority of the participants had more than a high school education. This was true for 5 out of 7 subjects in both groups. Most veterans were living with significant others (5 in each group). The Relaxation Group had 3 veterans in the Army and 4 in the Marines. The Imagery Group had 4 Army veterans and 3 Marine veterans. Groups were also similar on service connected disability.

There were 6 disabled veterans in the Relaxation Group, compared to 5 in the Imagery Group. Of each group, approximately half were wounded in Vietnam.

Reliability of Scales

In order to establish the reliability of the scales being used as dependent variables in the study, a series of Cronbach Alphas were computed on the items for each of the seven scales. Table 2 is a presentation of alphas for the frequency, intensity, and duration scales of the Imagery Questionnaire, the frequency and intensity scales of the PTSD Questionnaire, and the VESI-4 and VESI-3 Questionnaires. They are listed separately for both pre- and posttests.

The reliability of the seven scales is high, as shown by the high alphas presented in Table 2. The lowest alpha, .66, was found for the VESI-3, the highest alpha, .976, was found for the VESI-4 posttest. These are well within the acceptable range of reliability for scales of this type. For a more detailed description of the reliability analysis, refer to Appendix G which lists for each scale the corrected item to scale correlations.

Tests of Investigation's Hypotheses

The two hypotheses of the study were tested primarily by means

of analyses of variance. The ANOVA results for each hypothesis will be presented, followed by a description of the means and standard deviations for each of the scales.

Hypothesis I stated that there would be a difference between pretest and posttest for both groups on the several dependent measures of the study; that is, both groups would experience a reduction of imagery-related symptomatology. It is important to note that the absence of a no treatment control group places severe limitations on the conclusions that can be drawn from these results.)

Table 3 summarizes the ANOVAs for each of the dependent measures. An inspection of the F-tests and the related probabilities for the Time Main Effects for the scales reveals only two significant values--that for the single items "Control" ("How well can you control (switch off) disturbing Vietnam images that intrude into your mind?") and "Relaxation" ("How relaxed do you feel you can become when you try?").

The general lack of significant pre/post effects suggests that there is little evidence to support the hypothesis. The fact that the two items "Control" and "Relaxation" questions were significant lends some support to the prediction that the therapeutic interventions used in this study would increase the manageability of the symptoms by the participant. Although the brief interventions involved in this study may not have eliminated the long-standing imagery-related symptomatology suffered by these patients, a change

in the direction of ability to cope must be regarded as a worthwhile outcome.

Hypothesis II stated that the Imagery Group would show significantly more improvement than the Relaxation Group on each of the dependent measures of the study. It must be noted that this hypothesis requires a test of the Group x Time interaction effect. The group main effects are relatively unimportant given that the subjects were assigned to the groups "randomly."

The single significant main effect for group on the Intensity Scale of the Imagery Questionnaire may be interpreted simply as a consistent difference from pre- to posttest between the Relaxation and Imagery Groups. The lack of any Group x Time interaction effects indicates that the results provide no support for the second hypothesis; that is, the Imagery Group does not appear to have improved more on any of the dependent measures in this investigation.

It should be noted that another series of ANOVAs were carried out. In this case, however, the design included the independent variable of quality of imagery (i.e., frequency, intensity, and duration). This three-way ANOVA yielded no significant interaction effect (i.e., Group x Time x Quality of Imagery). This was also done for the PTSD questionnaire, which included the two qualities of frequency and intensity. This analysis also yielded no significant three-way interactions.

As is clear from the presentation of the ANOVA results, there

is very little support for the hypotheses presented in this study. An inspection of the means and standard deviations for the two groups across the several scales may, however, provide some suggestions concerning the hypotheses, as they may lend support for movement toward improvement.

On all three measures (the Imagery, PTSD, and VESI-4 questionnaires), there was overall movement toward improvement in both groups, although not statistically significant.

Tables 4 through 9 show that the means were lower on posttest versus pretest on all questionnaires. These tables also depict that the medians of the pretest/posttest have a greater difference than the means. It is feasible that with the small sample size one or two abberant scores could have a large effect on the mean which would not be as affected as the median. The differences between the mean and the medians on each scale tends to indicate this occurrence is possible and that the median is giving a more accurate representation of the difference between pretest/posttest scores.

An inspection of these tables also suggests that there is a good deal of variability across subjects in both groups. Variability (as shown in Tables 4 through 9) was generally high, as denoted by the wide ranges and high standard deviations.

Variability itself tended to fluctuate on both pre- and posttests for both groups; for example, Table 7 shows that for Group 2 on the intensity pretest, the standard deviation was 16.43 and on

the posttest, it was 7.98. Table 8 shows that for Group 1 on PTSD, intensity pretest, the standard deviation was 8.66 and for the posttest it was 21.68.

Correlations

It is of some interest to know how the various scales relate to each other. (Table 12 in Appendix G is a complete set of the intercorrelations for all the scales, both pre- and posttest, used in this study. For instance, if the correlations between the several scales is very high we may come to one of two conclusions. First, the scales essentially measure the same construct and therefore can be interchanged. Second, we might consider such a finding as providing convergent validation for the underlying construct of imagery-related symtomatology and other aspects of Post-Traumatic Stress Syndrome.

With regard to the latter possibility, one would expect to find higher correlations between the subscales of the Imagery Questionnaire and high correlations between the subscales of the PTSD Questionnaire.

The intercorrelations among the subscales (frequency, intensity, duration) of the Imagery Questionnaire were quite large and significant in all cases. This indicates that they covary and are likely to be all part of a single experience or syndrome. It is possible to therefore suggest that one could limit the Imagery Ques-

tionnaire to the frequency subscale excluding the intensity and duration subscales.

The reader should note that the correlations involving the PTSD and VESI-4 Questionnaires were done in two ways; first with imagery-related items included and later with those items removed. The purpose of the latter was to insure that there would be as little confounding of the PTSD and imagery correlations as possible. The correlations were essentially the same with and without the imagery items in the PTSD and VESI scales.

On the PTSD Questionnaire, the relationship between frequency and intensity is quite high (pretest $\underline{r} = .84$ and posttest $\underline{r} = .93$), suggesting a relatively high interscale overlap and that the frequency scale might be sufficient to tap into the PTSD syndrome.

The correlations between frequency on the Imagery Questionnaire and frequency on the PTSD Questionnaire pretest is .70 ($\underline{p} < .01$) which suggests considerable common variance of the frequency report for the two scales. The same is true for Imagery intensity and PTSD intensity scores ($\underline{r} = .79$, $\underline{p} < .01$). In the posttest measures there is considerable reduction of the sizes of those two correlations ($\underline{r} = .43$ and .49, respectively). The reason for this drop is not clear. A count of the number of people who changed between pre- and posttest indicates that there was more improvement in both frequency and intensity on the PTSD scale than on the Imagery Questionnaire.

Interestingly, the study also revealed that Relaxation is sig-

nificantly negatively correlated with Imagery frequency, intensity, and duration. This means that the more the subjects were able to relax, the less imagery symptomatology they experienced.

As Table 12 indicates, the correlation between Relaxation and Imagery frequency, intensity and duration were small and not significant on the pretest. On posttest, the correlations between Relaxation and all three of the Imagery subscales are significant. This rather remarkable change may be explained in a number of ways. Perhaps subjects' postintervention may have increased their ability to relax in that they learned to differentiate the sensations and experience of relaxation, as well as increase their ability to perceive themselves as relaxed when they were. This is supported by the significant ANOVA for the dependent variable of Relaxed.

A second possibility is that the variability in the reported ability to relax has increased in the posttest. There was a discernable inclination on the part of the participants on the pretest to report an inability to relax. The variability was limited since most of the subjects felt that they did not have the ability to relax. In the posttest, on the other hand, the variability may well have increased, thus making it more likely that there would be a higher correlation between Relaxation and imagery-related symptoms.

The pattern did not follow for pre- and posttest in correlations involving the dependent variable Control to imagery-related symptomatology. The correlations remained approximately the same

for the pre- and posttest on Control and there were no comparable shifts involving control.

Given the fact that the Control dependent variables showed a significant main effect for Time but no comparable shifts in the correlations with imagery-related symptomatology, it may be possible that there are underlying impediments to relinquishing imagery-related symptoms. This point will be pursued in the Discussion section.

Another interesting finding in this study was the low correlations found for the VESI-3 with all other scales. The VESI-3, which specifically measures stressors experienced in Vietnam, should have had higher correlations with other scales based on the accepted theory that stressors are strongly correlated with PTS symptomatology.

Although the VESI-3 is a standardized section of the Vietnam Era Stress Inventory, the direct and personal nature of the questionnaire may preclude it from being a valid measure of stressors. Most veterans were extremely reluctant to answer the questions on the VESI-3, feeling that the information was too personal and too painful to either re-access or divulge to an experimenter of a study.

Moreover, with high levels of paranoia present, the questionnaires on the whole were viewed with extreme suspicion and distrust. It is feasible that the responses obtained on the VESI-3 were not an accurate indication of stressors experienced. It is also pos-

sible that too little regard has been given to the actual phenomenological experience of the stressors, in that the stressors themselves may be experienced differently by different people and therefore may not be direct predictors of PTS symptomatology.

In support of this explanation, the reader is referred to Table 2, which indicates that among the various dependent measures the VESI-3 revealed the lowest Cronbach Alphas.

CHAPTER IV

DISCUSSION

Introduction

This chapter will be an attempt to interpret the findings related to the two main hypotheses as well as integrate some of the secondary findings into the analysis of the results of the hypothesis testing. The limitations of this study will be summarized and discussed, and suggestions for improved research in this area will be presented. Finally, there will be an attempt to construct a clinical model which emerges out of the study of imagery-related symptomatology (IRS) within the Post Traumatic Stress Disorder of Vietnam veterans.

Implications of the Main Results

The main hypotheses of this investigation stated that there would be a reduction in imagery-related symptomatology from Time One to Time Two for both the Relaxation and the Imagery treatment groups. There was also a prediction that the Imagery Group would show a greater reduction in imagery-related symptomatology than would the Relaxation Group. The results indicated that there was no support for either of these predictions.

The following will be an attempt at exploring possible causal

factors for the lack of significant findings.

First, it is worth reiterating that only 6% of all Vietnam veterans require hospitalization for Post Traumatic Stress Disorder. Because the sample population consisted of hospitalized veterans, who constitute the most symptomatically severe group within the PTSD diagnostic structure, there was in existence an immediate truncation of range, suggesting the possibility that responses were skewed. Moreover, out of this population, there were only seven participants available for each treatment group. The small N impedes the potential for significant results, and there are severe problems for generalizing any findings.

Other possible explanations for the lack of IRS reduction simply involve the possibility that neither the Relaxation nor the Imagery programs are effective treatments for reducing IRS in a group setting. As desensitization procedures have proven to be effective in reducing IRS with individual clients (Geer & Silverman, 1968; Schnidler, 1980), it is quite possible that the desensitization procedure utilized in the Imagery Group was not effective due to the group setting format.

There are several reasons that a group setting may have been a strong impeding factor. It is possible that the desensitization process must be tailored to each individual patient on a one-to-one basis for: (a) allowing sufficient time for complete relaxation responses to occur; (b) the "pacing" of anxiety-related imaginal scenes might need to be monitored according to the individual's

ability to generate and maintain the mental picture; (c) allowing for individual time differences in ability to alternate from the relaxation state to arousal scenes; and (d) allowing for unique individual responses which can only be explored with the clinician, which permits appropriate adjustments to be made.

Another possibility is that the treatment groups which met twice weekly, offering three hours of treatment time per week, was an insufficient amount of time to effect significant reduction of IRS. Both treatment programs were limited to eight weeks of treatment. It is possible that a longer period of treatment might prove more effective.

Throughout the broadest range of clinical literature it has been suggested that faith and belief in the healing process is crucial to positive therapeutic change (Singer, 1970). It was apparent during the prebriefing interviews that the majority of veterans were skeptical about any process being of value in reducing their IRS. These veterans seemed convinced of this based on: (a) the number of years that their imagery-related symptomatology had been present--the greater the time period, the more skepticism involved; and (b) previous experiences with unsuccessful treatments which facilitated negative expectations for treatment groups in this investigation.

Among the participants there was a pervasive attitude of mistrust in conjunction with an almost adolescent antagonistic stance toward the experimenter to prove the effectiveness of the treat-

ments. Lifton (1976) states that one of the manifestations of disruption posttrauma involves impaired human relationships which are particularly characterized by the "desire for support or help, accompanied by skepticism, irritability, and rage."

During the prebriefing, one veteran succinctly stated: "I'd like to believe it'll help, but it's only a damn experiment. Why should I?" Other veterans were openly hostile, verbally attacking the experimenter's position as potential helper/healer. One veteran stated: "Who are you to come in here and think you can get rid of stuff that's been going on in our heads for seventeen years? What have you got in that folder, magic? Only GOD can help us and he forgot us a long time ago!"

The experimenter was told by her research assistant that the veterans felt that they were being called upon to "be guinea pigs" for "some student's experiment." The overall atmosphere of mistrust was pervasive. This was largely due to the facts that the experimenter (a) was unknown to the veterans; (b) was in an authoritarian position; (c) required their signature for patients' rights documentation; (d) was operating out of a government facility (VA medical center); and (e) was offering only part-time clinical services and was not part of the unit's clinical staff.

Glover (1984) states: "Many of the Vietnam veterans who receive the diagnosis of Post Traumatic Stress Disorder are mistrustful of others, especially persons in authority or established institutions such as VA hospitals and the federal government."

From clinical observations, the experimenter felt that both treatment groups commenced with strong feelings of suspiciousness and a distinct lack of attitudinal openness on the part of the majority of veterans. Although the negativity markedly decreased once groups were underway, strong negativistic attitudes and expectations may have in part contributed to the lack of treatment efficacy.

There are several clinical themes which may be interesting to explore in attempting to discern the lack of significant results in this investigation. A most complex issue involves an underlying assumption that the intrusive and often horrific imagery-related symptomatology impinges upon the conscious mind and is viewed with abhorrence on the part of veterans. Although the veteran patient may vehemently feel that the IRS is undesired at conscious levels, it is important to recognize the role of IRS not only as symptoms representative of and produced by the PTS disorder, but as symptoms which could be viewed more traditionally as resistance to relinquishing pathology. It is important to recognize the role that unconscious motivation plays in maintaining the disordered state, and the ways in which underlying dynamics and secondary reinforcers are an impeding force in relinquishing imagery-related symptomatology. It is possible that, although IRS appears masochistic experientially, the symptomatology may play a crucial role in the psyche's maintenance of homeostatic "well-being" of the veteran.

It has been previously documented that IRS can typically become increasingly disruptive, the longer the symptoms persist. The ques-

tion that obviously arises is: What underlying dynamics are in operation which facilitate the perpetuation of the IRS? It is quite possible that the veteran patients would be forced to face a myriad of intrapsychic conflicts should the symptoms begin to abate. This prospect may be more threatening and overwhelming than dealing with the constant but familiar imagery-related symptomatology.

Interestingly, during a debriefing session, one veteran in the investigation stated that letting go of the images would mean "letting go of my dead buddies"--their memory and everything of importance that gave their deaths meaning and purpose.

Another veteran stated that the imagery was a constant reminder of all the people he killed--which he never could forgive himself for. It is also possible that not only does the imagery play a role in maintenance of unresolved clinical issues unique to each veteran, but that it also serves as an ongoing memorial to their murdered friends and slaughtered enemies. This seems particularly prevalent for veterans with the most severe imagery-related symptomatology where there is a profound need to "carry the torch" in search of meaning and purpose that would make justifiable sense out of what has often been termed "the most senseless war."

Another factor involved in the maintenance of IRS for hospitalized veterans involves the severity of debilitation the veteran experiences--to the degree that he cannot function normally within society. There are many powerful forces that promote attachment to the "sick role." For many severely dysfunctional veterans, the

"sick role" maintains the conceptualization of "not being responsible" (out of control), for his current behavior as well as exoneration for war involvement. This may help to relinquish the oftentimes overwhelming burden of guilt related to Vietnam experiences. Secondary reinforcers of the "sick role" include receiving high levels of monetary compensation (which precludes employment) and serves to maintain the dependent and disabled status of the veteran, who is thereby absolved from the task of learning to function normally within society. Should the severely incapacitating IRS dissipate, it could be a rather frightening experience to adjust to a world one has not successfully functioned in for most of one's adult life.

Secondary Findings

Although no significance was found for the central predictions of this investigation, there were, however, several findings of interest. The Imagery and PTSD Scales both revealed strong relationships between frequency and intensity of symptomatology. Speculation about the relationship can lead to interesting theoretical avenues. It may be possible that through frequent unconsciously instigated repetition of imagery-related or other PTS symptoms, the experiences become intensified through the very act and process of repetition. It might even be possible to speculate about chemical or neurological alterations which may have occurred at phys-

iological levels due to the sustained arousal states veterans were subjected to during prolonged combat exposure.

Another viewpoint would emphasize the need for the veteran to discharge the IRS that is continually generated, in an unconscious attempt to resolve traumatic experiences through repetition. One might hypothesize that the greater the unresolved conflicts surrounding traumatic occurrences, the more frequently IRS is experienced with equivalent levels of intensity. In this theory, the discharge of accumulated energy is emphasized and the intensity of the imagery-related or other symptoms would be proportionate to the frequency of need for discharge. This could possibly account for the high correlation between frequency and intensity.

It is also possible to view the veterans' continued search for intensity of experience (an intrapsychic form of "thrill-seeking") as contributing to the strong frequency/intensity relationship. "High intensity" experiencing was the norm in Vietnam, established at a most malleable developmental phase during adolescence. The very experience of intensity (regardless of whether concurrent emotions are pleasant or unpleasant) seems to fill a desolate void which has been in existence since departure from Vietnam.

Most veterans find their perceptions of "the world" (the United States) blunted, dull, and flat in comparison to Vietnam memories and experiences. However painful these memories may be, they may serve to fulfill the lost intensity felt in Vietnam which was perceived as exciting, thrilling and inimitably "alive" in the face

of constant death. Broyles (1984) states: "Part of the love of war stems from its being an experience of great intensity; its lure is the fundamental human passion to witness, to see things...War stops Time, intensifies experience to the point of a terrible ecstasy" (p. 56).

Repetition of frequent and intense Vietnam imagery, as well as other PTS symptoms, may very well serve to maintain the Vietnam experience and its concomitant sensations and emotions. This may suggest an explanation for the many veterans who live in "split worlds" between the United States and Vietnam via their mental imagery and affective states. Symptoms in which frequency is combined with intensity of experience may provide the elusive but desired return to Vietnam via the Reliving Experience in perhaps an unconsciously instigated search for lost sensations and emotional experiences which were deeply gratifying at psychic levels not in the realm of usual experience for the civilian individual.

Perhaps the most interesting findings in this investigation involved the single items "Relaxed" and "Control," which changed significantly from pre- to posttest. The "Relaxed" and "Control" questions were phrased in the following manner: "How relaxed do you feel you can become when you try?" and "How well can you control (switch off) disturbing Vietnam images that intrude into your mind?" The findings indicated that on the "Relaxed" and "Control" items subjects were increasingly able to relax when they tried, and were better able to control (switch off) IRS from pre- to posttest.

It is widely accepted theory that relaxation and arousal states cannot simultaneously coexist (Wolpe, 1958). Based on this concept (as well as clinical observation by the experimenter that increased arousal states were consistently evident during the process of imagining Vietnam-related imagery), it would have been expected that, if relaxation ability had increased, IRS would have been reduced. Interestingly, the increased ability of subjects to relax from pre- to posttest did not facilitate a significant reduction in imagery-related symptomatology. This occurred despite the finding that Relaxation had strong negative correlations with Imagery frequency, intensity and duration posttest. The findings revealed that the more subjects were able to relax (and they were significantly able to relax from pre- to posttest), the less IRS was reported experienced. This change was, however, insufficient in reducing overall IRS.

There are several possibilities which may explain this outcome. The "Relaxed" question queried: "How relaxed do you feel you can become when you try?" An obvious speculation may be that despite an increased ability to relax upon attempt, the subjects may not have "tried" to relax (i.e., followed any of the relaxation exercises to specifically decrease their IRS) when images were actually beginning to occur.

It is also possible that the relaxed state and its concurrent benefits are transient in nature, and it would require persistent effort on the part of the subjects to promote relaxation via the

relaxation exercises. Based on the experimenter's clinical observation and judgement, the discipline and concentration required to initiate exercises on a consistent basis would be too demanding for the majority of hospitalized veterans with Post Traumatic Stress Disorder. Without the integration of a generalized relaxation response based on a condensation of repeated relaxation practice, relaxation may be too fleeting a state to effectively reduce ongoing IRS.

It was interesting, however, to note that during debriefing sessions, most veterans stated that they did not experience disturbing Vietnam imagery during Relaxation exercises in treatment groups. It is possible that there is a distinct difference between the efficacy of "being relaxed" via another person's verbal guidance versus actively attempting to relax on one's own initiative.

Another possibility is that, although both treatment groups became increasingly able to relax from pre- to posttest, participants may have been unable to utilize this increased knowledge in their daily lives. It may also be likely that subjects were unable to apply their increased ability to relax to specifically aid them as intrusive imagery began to occur.

On the single item "Control" ("How well can you <u>control</u> (<u>switch off</u>) disturbing Vietnam images that intrude into your mind?"), there was a significant main effect (from Time One to Time Two), but there were no concurrent shifts in correlations with IRS. This finding may add increased support for the notion previously discussed

regarding the difficulties inherent in relinquishing IRS due to unconsciously motivating needs.

Limitations

Major limitations in this investigation arose out of high levels of mistrust, paranoia and suspiciousness, typically symptomatic of those diagnosed with Post Traumatic Stress Disorder. The small sample size ($N = 7$) and inability to form a No Treatment Control group were direct results of the small pool available from which to draw a sample, as well as an inability to obtain voluntary participants. Attrition rates were extremely high during the pre-briefing phase, when the veteran subjects became aware that they were required to sign Patients' Rights forms. This aspect in and of itself was representative of the high levels of suspiciousness which the veterans felt regarding the study.

Due to the lack of participants, the Imagery Group was forced to begin three weeks after the Relaxation Group, while the experimenter waited for new admittants to the PTS program. Given the unit's admittance schedule, in conjunction with the veterans negativity regarding the investigation, there was no viable alternative to staggering the treatment groups, which afforded the opportunity to recruit veterans from an increased population of veterans who had been on the unit's waiting list.

It may be possible that the interaction between participants

in the Relaxation Group and those in the Imagery Group could have occurred, affecting (i.e., reducing anxiety) levels of incoming Imagery Group participation, and affecting pretest results. Although this is a possibility, the prebriefing sessions with Imagery Group participants evidenced just as severe paranoia, negativity and mistrust, as did the participants in the Relaxation Group. Additionally, during the experimenter's nine months of clinical experience on the PTS unit (during internship), it was notably rare for veterans to discuss treatments (group or individual) during nontreatment time periods. There seemed to be a tacit agreement among the veterans which involved day-room time or nontherapy periods to exist as "time-out" sessions. Communication generally occurred only at the most superficial levels, involving exchanges about television programs or sports interests, etc. Based on clinical observation, this relational style was still in effect during the time period in which this investigation occurred.

Due to the necessity for only voluntary participants, there was an additional self-selection process via attrition. The veterans who were most severely hampered by their feelings of mistrust and paranoia were self-eliminated either during prebriefing or pretreatment assessment phases. This does not indicate that veterans with the most severe PTS were self-eliminated, as mistrust is only one of the many pronounced relational symptoms evidenced in the Post Traumatic Stress Disorder. It is important to note that almost all of the study's participants were initially extremely

negative and suspicious, but they seemed more motivated to participate based on their desire for effective treatment in the midst of their skepticism.

Lidz (1946) and Lifton (1976) have both described mistrust as an attitude found in survivors of massive traumas. Lidz's research involved psychiatric casualties from Guadalcanal, and Lifton's work focused on survivors of the Buffalo Creek Disaster as previously discussed in this work. Lifton found that twenty-seven months post flood, victims remained mistrustful and cautious of even relationships that had been viewed as intimate and loving prior to the trauma. Survivors of Nazi concentration camps exhibited similar reactions subsequent to being exposed to extreme and sadistic acts of brutality and torture (Krell, 1979).

It is possible to speculate that survivors of massive trauma experience a profound and perhaps unalterable disappointment in their expectation that society would support and protect them from disaster. The negative attitudes Vietnam veterans encountered during their homecoming experience reinforced this disappointment in society to an even greater extent.

Extreme levels of mistrust made initial stages of researching this population extremely difficult. During the pretest assessment phases, both groups of veterans grumbled verbally but unintelligibly of their dissatisfaction while completing various portions of the questionnaires. One veteran in the Relaxation Group completed all pretest questionnaires until he encountered VESI-3, which focuses

on specific questions regarding stressors in Vietnam (such as: "How often did you kill Vietnamese?)." At this point, the veteran threw his pen and all questionnaires across the room, got up glaringly staring at the experimenter, cursing and shouting that he was withdrawing, and that the experimenter had some nerve asking such personal questions. Following this, he physically shoved by the experimenter as he exited the room. Other veterans grumbled their agreement during the VESI-3, and they were reminded by the experimenter that they could leave blank any questions they found offensive. In view of the personal nature of the questions on the VESI-3, and resulting negative response, it is not surprising that low correlations were found for the VESI-3 with all other scales. Theoretically there would have been expectations of high correlations with other scales, as stressors are considered to be strongly correlated with PTSD symptomatology.

In retrospect, the experimenter questions the usefulness of this questionnaire, as the personal nature of the items may facilitate a potential tendency on the part of respondents to fabricate, which would preclude it from being a valid measure of stressors. It is also likely that levels of mistrust and paranoia were exacerbated by the administration of this questionnaire, which may have perpetuated and prolonged negative attitudes prior to beginning treatment groups. It was fortunate that the VESI-3 was the last questionnaire administered in the sequence of questionnaire completion. It should, therefore, not have negatively affected responses

to other measures.

Implications for Clinical Theory

Horowitz (1977) has conceptualized trauma as a stress on the individual's information processing system. His five point model of Post Traumatic Stress discussed in the Literature Review emphasizes that the individual must eventually learn to integrate the traumatic event into his pre-existing view of self, others, and the world. This perspective is most in accordance with the experimenter's clinical observations of veteran participants in this investigation and gives particular validation to the role of traumatic imagery within the framework of the PTS syndrome.

Horowitz describes the following sequence as reactions to trauma: Outcry, Denial, Intrusion, Working-through, and Completion. The focus on the Denial and Intrusion phases is central to the realm of imagery-related symptomatology for Vietnam veterans. Denial is characterized primarily by emotional numbing and the inability to face memories and issues related to the trauma. Traumatic imagery and affect are avoided. Intrusion is characterized by a flooding of IRS: intrusive repetitive thoughts and images, nightmares, or flashbacks as well as the experiencing of periods of strong related emotion. Horowitz's model emphasizes that as the Denial and Intrusion phases continue to alternate, there is a gradual decrease in severity and frequency of symptomatology until a new equilibrium

or working-through is accomplished and the traumatic experiences are incorporated into the individual's new world view. The role of imagery-related symptomatology is embedded within the alternation of the Denial and Intrusion phases. For the most severely debilitated Vietnam veterans represented in this investigation, focus on the vicissitudes of the Denial/Intrusion phases exemplifies the crux of the dysfunction involved.

An issue that is central for this group of veterans (requiring hospitalization for PTSD) is that there seems to be a tremendously impeding fixation or blockage within the Denial/Intrusion vacillation. This serves to maintain rather than decrease the alternating IRS flooding versus numbing phase patterns, which do not appear to culminate in the expected decrease of frequency and intensity of IRS, as Horowitz proposes. The Working-through phase is barely approached and the veterans' subjective experiences and overt behavior seem to revolve around the phenomenological experiences involved in Denial and Intrusion states.

Based on overwhelming clinical reports from veterans hospitalized on the PTS unit, the traumatic imagery seems to intensify rather than diminish the longer the symptoms persist.

The clinical questions which arise are: (1) What are the etiological factors involved for Vietnam veterans who experience the continual loop of Denial and Intrusion? (2) Why, as Horowitz supports, is there not spontaneous decrease in which IRS becomes dissipated? (3) Are there factors indigenous to this veteran popu-

lation which impede a spontaneous decrease? (4) What clinical interventions could be utilized specifically with Vietnam veterans to disrupt the alternating pattern in an effort to facilitate movement to the next phases of Working-through and Completion? Once the movement to these phases was achieved, a significant reduction or elimination of IRS would be expected.

In responding to these questions, clinical observation supports that veterans with the most severe IRS spend a great portion of their daily existence in Vietnam via their imagery experiences. At some intrapsychic level the world of Vietnam (and its accompanying imagery) maintains for the veteran a world that is unequalled by the reality of "The World" (United States). As mentioned in previous sections, unresolved conflicts related to traumatic events, an inability to relinquish the "sick role" due to secondary reinforcers, and fears of facing the efforts and issues involved in living in this world, all may contribute to a strong desire to return to and imaginally exist in Vietnam.

Although traumas experienced in Vietnam may leave permanent scars and unresolved conflicts which must be clinically addressed, what is equally crucial from a clinical perspective is the virtually non-addressed and well-hidden phenomenological experience which carries shame, secrecy, and fear of condemnation for most veterans. Simply stated, for many veterans, Vietnam was not only terrifying and traumatic, but was the best, richest, and most vital experience of their lives; unequalled by experiences existing in "The World"

(United States).

Broyles (1984) states that Vietnam possessed an "awesome beauty, the haunting romance, of a timeless nightmare." "It is no mystery why men hate war. War is ugly, horrible, evil, and it is reasonable for men to hate all that. But I believe that most men who have been to war would have to admit, if they are honest, that somewhere inside themselves they loved it too, loved it as much as anything that has happened to them before or since. And how do you explain that to your wife, your children, your parents, or your friends?" (p. 55)

In an exchange with another Vietnam veteran (who also functioned well since Vietnam), Broyles cites an interaction with his friend who says: "What people can't understand is how much fun Vietnam was. I loved it, I loved it, and I can't tell anybody." (p. 55)

Broyles offers various reasons for the magnetic quality of the war experience. Among them is the intensity and strength of relationships which are not feasible in "The World." Broyles elucidates:

> The enduring emotion of war, where everything else has faded, is comradeship. A comrade in war is a man you can trust with anything, because you trust him with your life (p. 58).

Broyles cites Philip Caputo's writing: "Unlike marriage, it is a bond that cannot be broken by a word, by boredom or divorce or by anything other than death." (p. 58)

Broyles continues:

> Despite its extreme right wing image, war is the only utopian experience most of us ever had. Individual possessions and advantage count for nothing; the group is everything. What you have is shared with your friends. It isn't a particularly selective process, but a love that needs no reasons, that transcends race and personality and education--all those things that would make a difference in peace. It is simply, brotherly love. (p. 58)
>
> ...But there are other more troubling reasons why men love war. The love of war stems from the union deep in the core of our being between sex and destruction, beauty and horror, love and death. War may be the only way in which most men touch the mythic domains of our souls. It is, for men, at some terrible level, the closest thing to what childbirth is for women: the initiation into the power of life and death. It is like lifting off the corner of the universe and looking at what's underneath. To see into the dark heart of things, that no-man's land between life and death or even beyond. (p. 61)

Broyles' provocative theories are supported by clinicians who have worked extensively in this area, based on therapy sessions with heavy combat Vietnam veterans. One veteran participating in this study was remembered for stating: "I don't know how to say this, but after a while there was something about holding my M60 and shooting rounds, which made me feel like God himself. I had that kind of power over life and death at the flick of my finger. I used that power and what I can't forgive myself for is that I enjoyed it."

This seemingly bizarre mixture of intensity, love, horror, and trauma are relived for many veterans in the captivating memories

and images of Vietnam. For many veterans, once this macabre world is experienced, it is almost addictive; a place of fascination, of wonder and terror; simultaneously desiring to permanently escape and never wanting to leave. Perhaps the alternation of the Denial/Intrusion states most adequately reflects both fundamental desires.

In addition to exploring the aversive traumas experienced in Vietnam, it may be equally crucial to explore the traumas and their ramifications related to the pleasures and deep satisfactions involved in the Vietnam experience. This exploration may aid in attempting to find answers to the clinical questions raised in this chapter. Clinical reports from therapists who have done extensive clinical work with combat Vietnam veterans corroborate this position based on undocumented clinical reports. Future research in this uncharted realm of experience could be vital to understanding the role of IRS within the framework of the Post Traumatic Stress Disorder for Vietnam veterans.

Symbolic language is the language of the unconscious mind, as is memory and the realm of the imagination. Imagery-related symptomatology of the Post Traumatic Stress Disorder emerges out of the unconscious realm and manifests in conscious mental visualizations.

Based on the success of imagery-oriented interventions with Vietnam veterans previously discussed in this work, as well as clinical observations and insights gained during this investigation,

it could be suggested that IRS may best be reduced by concurrent or consecutive utilization of both traditional and imagery-oriented psychotherapeutic techniques. The following is an attempt to provide a direction for clinical research which may be beneficial in treating Vietnam veterans experiencing severe IRS within the Post Traumatic Stress framework. The format incorporates a design for disruption of the Denial/Intrusion loop and attempts to facilitate movement through the associated blockages which perpetuate imagery-related symptomatology. This model also suggests specific clinical interventions which may be utilized. The goal is to achieve a working-through to completion process in which IRS would be either significantly diminished or eliminated, as the individual veteran integrates traumatic material into a new world view.

As in any therapeutic endeavor, the taking of a complete psychosocial history is mandatory. Emphasis on religious beliefs of veterans may profoundly affect the severity of fixations on traumatic material and accompanying IRS. An extensive chronological combat history is of the essence, with careful query and focus on particularly traumatic events experienced by the veteran. Clinical exploration of issues and dynamics and emphasis on the unique phenomenological experience of each trauma for each individual is paramount for gaining an understanding of the disabling issues involved.

Although the establishment of a strong rapport is crucial to the successful outcome of any therapeutic endeavor, particular

effort must be involved in establishing the therapeutic alliances with Vietnam veterans diagnosed with Post Traumatic Stress. A non-judgmental and unconditionally supportive atmosphere is crucial if progress is to be made. Validation of the veteran's unique experience, regardless of the events involved, are critical to the process, as is the neutrality of the clinician's position. The therapist working with veterans and their imagery-related symptoms must quickly become desensitized to the most gruesome details of combat-related trauma. Involvement with imagery symptomatology requires that the clinician be able to tolerate "hearing" and working with graphically gory, brutal, and horrific events of vividly detailed scenes, veterans must learn to face in the therapeutic setting. Compassion has its place and is certainly necessary, but the clinician must exert extreme care in "containing" countertransferential phenomena generated out of the extraordinarily charged material. A veteran once told me that he couldn't tell his therapist about certain events which occurred in Vietnam because when relaying a particularly difficult incident (the veteran had described how he had felt carrying the dismembered shredded torso of a "good buddy" back for body bag insertion), the therapist "got tears in his eyes." The necessity for the client to be permitted to utilize "therapeutic space" is even more crucial in clinical work with individuals who have experienced acute traumatic experiences.

Once the clinician has a keen understanding of the veteran's

clinical picture, including the exploration of potential wonderment, pleasures and satisfactions amidst the horror, relaxation and imagery work may be particularly beneficial at this juncture.

To increase imagery capability, relaxation and imagery training may be utilized as delineated in this study. Segments of both programs can be employed as needed. Prior to entering the world of Vietnam at imaginal levels, it may be necessary for extremely agitated veterans to complete a Systematic Desensitization of various traumatic Vietnam scenes, on a one-to-one basis, to neutralize the most severely arousing traumatic imagery.

Once this is accomplished, it may be possible that a great deal of working-through can be achieved via imagery-oriented therapy which may be most efficacious in specifically addressing the unique issues and traumatic blockages of the individual veteran. To illustrate the type of imagery techniques which may be beneficial, the following example is offered:

A Vietnam veteran who had training in relaxation and imagery techniques was asked to return imaginally to the traumatic events of having killed a small child in retaliation for the child's killing of his best friend. The child had thrown a large ball to his friend which had contained a live grenade, blowing his body to bits. The veteran in treatment had been close enough to witness the event, and after finding himself "trying to put pieces of his friend's body back together," he spotted the child and shot her to death. The veteran stated that he felt as if he were "in a slow moving

dream," but remembers feeling intense satisfaction in revenging his friend's death, simultaneously experiencing extreme guilt over killing "just a little girlchild." Imagery-related symptoms involved the re-experiencing of the event in frequent nightmares which left him enraged and terrified.

Unresolved issues for this veteran involved severe grief reactions for both the loss of his best friend and for the death of the "little girlchild." Tremendously overwhelming guilt was involved for killing the child and, moreover, for enjoying the satisfaction it gave him. He also experienced guilt for not being able to "somehow protect" his friend, saving him from death.

Post relaxation, the veteran was asked to run through the traumatic scene (with eyes remaining closed) as he remembered it, and was guided to let himself freely feel and express any emotions that were associated. The veteran was reluctant to proceed with this exercise, feeling that he could be overwhelmed by his responses. The veteran was, therefore, instructed to imagine a large white screen in a movie theatre and to project an image of himself sitting in the theatre looking at the screen. The veteran was instructed to project the traumatic scene onto the screen as if he were watching a movie, while he sat safe and separate from what he was viewing. Over the course of several sessions, encountering the trauma and ultimately experiencing associated affect in piecemeal fashion, the veteran was able to face and explore profound issues which stemmed from the trauma. During the course of imagery

work, the veteran was instructed to visualize his dead friend and have a conversation with him. Although the veteran initially said he "felt stupid doing this," with encouragement he proceeded to superficially interact with his friend, eventually telling him how much he missed him, how he wished he could have died in his place, and how sorry he was for not being able to save him. The veteran was encouraged to "listen" to what his best friend had to say in response, and ultimately, after several conversations, the veteran felt an increased sense of resolution regarding this relationship.

Guilt over the "little girlchild's" death was more difficult to deal with as the veteran felt that not even the little girl could forgive him for how much satisfaction and enjoyment he felt (and to some degree still felt 17 years later) in killing her. Power figures for this veteran involved strong religious symbols; Jesus Christ in particular. Several sessions were spent exploring the religious ramifications of the event and the veteran's reactions. Ultimately a "just penance" was self-administered, which seemed to lessen severe guilt reactions, resulting in diminished experiences of previously severe intrusive and repetitive nightmares regarding the event. Nightmares about the little girl became less intense and less frequent; the working-through process was in progress.

For each veteran, the content of the imagery interventions would of course be individually tailored, relating to the veteran's unique experiences and circumstances. The working-through process in the imaginal realm will typically involve themes of power, rela-

tional blurring and engulfment, bereavement, and overwhelming guilt. Issues may be significantly more charged when enjoyment and feelings of satisfaction were experienced.

Imaginal scenes may involve sending the adult veteran to embrace and comfort the "soldier self" created in Vietnam, sharing worlds and thereby attempting to "heal the split" between the selves and worlds experientially. This would create a myriad of communicational forums within associated visual scenes to interact with "dead buddies" or "enemies." In this context, unresolved torments would have mediums through which resolution could be achieved.

Literally re-arranging traumatic scenes imaginally--allowing the veteran to alter the occurrences as it "should or could have been" may prove beneficial in gaining a sense of mastery over the imagery which the veteran typically feels powerless to control. Various Gestalt techniques could be utilized in this work most effectively, creating scenes and circumstances imaginally that would promote the opportunity for experiential change in the veteran's perception and ability to integrate the traumatic event. Future research in this area would be most exciting.

The following is a clinical outline based on the above material which may aid in developing future research in IRS reduction of Post Traumatic Stress Disorder with Vietnam veterans.

I a. Psychosocial History--emphasis on religious upbringing and current beliefs regarding death. Power figures; parental, religious, symbolic.

b. Thorough exploration of chronological combat history.

II a. Focus on exploration of traumatic experience, clinical issues and emerging themes.

III a. Identification of Traumatic Blocks; issues and related affect.

b. Identification and validation of euphoric, intense and irreplaceable aspects of Vietnam experience.

IV a. Creation of imaginal scenes; use of Guided Imagery for re-enactment and altered construction of events or interactions with significant figures.

b. Visual and experiential facilitation of this medium in which working-through and resolution phases can be reached via imaginal levels for integration into the veteran's new world view.

A P P E N D I C E S

A P P E N D I X A

INFORMED CONSENT STATEMENT

Before agreeing to participate in this study, it is important that the following explanation of the proposed procedures be read and understood. It describes the purpose, procedures, benefits, risks and discomforts, and precautions of the study. It also describes the alternative procedures available and the right to withdraw from the study at any time. It is important to understand that no guarantee or assurance can be made as to the results. It is also understood that refusal to participate in this study will not influence standard treatment on the Post-Traumatic Stress Unit.

I, _____, agree to participate in the Post-Traumatic Stress research study, the purpose of which is to compare treatment for reducing imagery-related PTS symptoms.

Procedure: I will participate in several face-to-face research interviews with Andrea Wilde, M. S., in which I will be asked to relate information concerning the following: 1) Military experience, including description of combat events based on: a) imagery experiences (i.e., daydream images, flashbacks, and nightmares) related to Vietnam upon return following discharge and b) imagery experiences covering the period from discharge to present; 2) Questions dealing with daily functioning, feelings, and activities as well as my relationship with others.

I will be participating in either the Relaxation or the Imagery Group. Groups will meet for a period of eight weeks, twice weekly. I will also be asked to fill out several questionnaires dealing with similar material mentioned above, both prior to and after the groups have ended. The procedure will take approximately 3-4 hours to complete all questionnaires on each occasion.

I understand that confidentiality is assured and subject to the same rules of confidentiality as all therapies. Research questionnaires will be identifiable only by research number; names will be omitted.

Subject _____

Investigator _____

Witness _____

Date _____

No information whatsoever pertaining to this research study will in any manner be released or affect issues of disability compensations.

Risks and Precautions: The research interviews and/or groups may include discussion of images of experiences and feelings which may be painful to recall. If I feel at all upset by an interview or group, brief counseling will be available by Andrea Wilde as well as the full staff on the in-patient unit. Any questions that I may have concerning any aspect of this investigation will be answered by Andrea Wilde.

I am free to withdraw from this investigation at any time should I wish to withdraw. I have been assured that standard therapy for my condition will remain available to me.

Before research groups begin, a pre-interview will be held, and after research groups and questionnaires are completed, a last interview will be held where I will receive verbal feedback on my participation in the study.

Subject _____

Investigator _____

Witness _____

Date _____

APPENDIX B

Demographic Survey

1. Name _____

2. Age _____ 3. Date of Birth _____ / _____ / _____

MO DAY YEAR

4. Race: ___ White, ___ Black, ___ Other

5. Sex ___ M ___ F

6. How many children were there in your family including yourself?
_____

7. How many brothers and sisters did you have? (If you were an only child, check none.)

Brothers _____ Sisters _____ None _____

8. Were you the oldest child, youngest child, or in between?

Oldest child ? _____

The _____ oldest child of _____

Youngest child? _____

9. Check highest educational level you have attained:

_____ Grade school or less
_____ Some high school
_____ Graduate high school
_____ GED
_____ Some undergraduate school
_____ Some trade school
_____ Completed undergraduate school
_____ Completed trade school
_____ Some graduate school
_____ Completed graduate school

10. In the above list (Question #9) mark an '0' by the highest educational level you had attained before going into the service (even if the same item you have already checked).

11. What is your current employment status?

_____ Student

_____ Unemployed (how long?)

_____ Employed, full time

_____ Employed, part time (how many hours per week?)

_____ Laid off

_____ Disability

12. What kind of work do you usually do? _____

13. Are you looking for work or looking for work in addition to work you already have? _____ YES _____ NO

14. Approximate personal gross yearly income (include unemployment, disability, G.R., etc.) _____

15. What was your employment status at the time you entered the service?

_____ Student

_____ Unemployed (how long?)

_____ Employed, full time

_____ Employed, part time (how many hours per week?)

_____ Laid off

_____ Disability

16. What was your marital status at the time of entering into the service? _____

17a. Which is your marital status now?

Married (never divorced) _____

Married (previously divorced) _____

Married (previously widowed) _____

Separated _____

Divorced and still single _____

Divorced (living as a couple) _____

Living as a couple _____

Single _____

17b. Living arrangements (prior to admission to PTSD unit)

___ Alone ___ With parent, sibling

___ With significant other

18. If divorced, in what year(s) were you divorced? _____

19. Number of children _____.

Do your children presently live with you? _____

20. (Home) Address:

_____

_____

_____

(Home) Phone Number:

_____

MILITARY INFORMATION

Branch of service:

_____ Army _____ Navy _____ USMC _____ Air Force _____ Other

Enlistment date: _____ Discharge date: _____

Combat: _____ yes _____ no

If yes, how long? _____ years _____ months

Service-connected disability: _____ yes _____ no

If yes, what % _____

Claim pending: _____ yes _____ no

Non-service connected disability: _____ yes _____ no

Were you wounded while in Vietnam? _____ yes _____ no

Treatment while on active duty: _____ yes _____ no

If yes, for what? (i.e., medical, drug, alcohol, psychiatric, etc.)

_____

_____

What areas in Vietnam did your unit(s) operate in?

_____

_____

_____

A P P E N D I X C

IMAGERY ASSESSMENT QUESTIONNAIRE

DATE _____ SUBJECT # _____

IMAGERY ASSESSMENT QUESTIONNAIRE

1. This is a questionnaire about intrusive memories, imagery, nightmares, and flashbacks experienced by Vietnam veterans. Please answer each question carefully, based on the very specific types of experiences listed. Answer each question based on your experience DURING THE LAST 14 DAYS. If you've never had the experience, cirle 0, and move on to the next question.

2. There are 3 scales below each question. The first involves how often you have the experience. The second involves how intense the experience is for you in terms of how it affects you.

   e.g. 1 = minimal (only slightly disturbing)
   2 = mild (somewhat disturbing)
   3 = moderate (definitely disturbing)
   4 = severe (very disturbing)
   5 = extreme (severely disturbing, feeling like you're "losing it.")

   The third scale asks you to rate how long each experience lasts.

3. This material will be used as research data, as will the other questionnaires you are completing. All of the information on these forms is strictly confidential. Your name will be removed, and you will be identified only by a research number. If you have any questions or concerns, please do not hesitate to discuss them with me.

Andrea Wilde

PLEASE REMEMBER TO ANSWER EACH OF THE FOLLOWING QUESTIONS BASED ON YOUR EXPERIENCES DURING THE LAST 2 WEEKS ONLY

1. Do you ever have vague (as opposed to very severe) impressions of Vietnam events which are painful or disturbing and which intrude into your mind?

(circle) the #		never	1 x month	1 x every 2 weeks	1-2 x week	3-7 x week	more than once a day
	How often:	0	1	2	3	4	5

(circle) the #		minimal	mild	moderate	severe	extreme
	How intense:	1	2	3	4	5

(circle) the #		up to 60 seconds	1-5 minutes	up to 1 hour	1-5 hours	more than 5 hours
	Time it lasts:	1	2	3	4	5

2. Do you have extremely vivid images of Vietnam which are painful or disturbing?

(circle) the #		never	1 x month	1 x every 2 weeks	1-2 x week	3-7 x week	more than once a day
	How often:	0	1	2	3	4	5

(circle) the #		minimal	mild	moderate	severe	extreme
	How intense:	1	2	3	4	5

(circle) the #		up to 60 seconds	1-5 minutes	up to 1 hour	1-5 hours	more than 5 hours
	Time it lasts:	1	2	3	4	5

3. Do you have images about Vietnam that are painful or disturbing, keep repeating themselves over and over again, which you can't get out of your mind no matter how hard you try?

(circle) the #		never	1 x month	1 x every 2 weeks	1-2 x week	3-7 x week	more than once a day
	How often:	0	1	2	3	4	5

(circle) the #		minimal	mild	moderate	severe	extreme
	How intense:	1	2	3	4	5

(circle) the #		up to 60 seconds	1-5 minutes	up to 1 hour	1-5 hours	more than 5 hours
	Time it lasts:	1	2	3	4	5

4. Do you have disturbing images about Vietnam which follow <u>seeing</u>, <u>hearing</u>, or <u>smelling</u> something in your environment which remind you of Vietnam?

(circle) the #		never	1 x month	1 x every 2 weeks	1-2 x week	3-7 x week	more than once a day
	How often:	0	1	2	3	4	5

(circle) the #		minimal	mild	moderate	severe	extreme
	How intense:	1	2	3	4	5

(circle) the #		up to 60 seconds	1-5 minutes	up to 1 hour	1-5 hours	more than 5 hours
	Time it lasts:	1	2	3	4	5

5. Do you have images of Vietnam that affect your mood in a negative way <u>long after</u> the images leave?

(circle) the #		never	1 x month	1 x every 2 weeks	1-2 x week	3-7 x week	more than once a day
	How often:	0	1	2	3	4	5

(circle) the #		minimal	mild	moderate	severe	extreme
	How intense:	1	2	3	4	5

(circle) the #		up to 60 seconds	1-5 minutes	up to 1 hour	1-5 hours	more than 5 hours
	Time it lasts:	1	2	3	4	5

6. Do you have painful or disturbing images about Vietnam where you are not aware of what triggered the images?

(circle) the #		never	1 x month	1 x every 2 weeks	1-2 x week	3-7 x week	more than once a day
	How often:	0	1	2	3	4	5

(circle) the #		minimal	mild	moderate	severe	extreme
	How intense:	1	2	3	4	5

(circle) the #		up to 60 seconds	1-5 minutes	up to 1 hour	1-5 hours	more than 5 hours
	Time it lasts:	1	2	3	4	5

7. Do any of the following produce images about Vietnam which intrude into your mind? a) anniversary dates; b) specific seasons; c) weather conditions

		never	1 x month	1 x every 2 weeks	1-2 x week	3-7 x week	more than once a day
(circle) the #	How often:	0	1	2	3	4	5

		minimal	mild	moderate	severe	extreme
(circle) the #	How intense:	1	2	3	4	5

		up to 60 seconds	1-5 minutes	up to 1 hour	1-5 hours	more than 5 hours
(circle) the #	Time it lasts:	1	2	3	4	5

8. Most everyone has heard of the term "flashback." Usually this involves something happening which makes you think you're seeing, hearing, or experiencing something from Vietnam. It can be a brief vivid image, or a whole scene. <u>While it's happening it feels real</u>, but afterward you realize it was in your mind. One veteran said he suddenly thought he saw Vietnamese walking down the street of his home town, and another veteran said he felt and behaved as if he were completely back in Nam. Have you had this experience? (Remember: during the last 2 weeks only).

		never	1 x month	1 x every 2 weeks	1-2 x week	3-7 x week	more than once a day
(circle) the #	How often:	0	1	2	3	4	5

		minimal	mild	moderate	severe	extreme
(circle) the #	How intense:	1	2	3	4	5

		up to 60 seconds	1-5 minutes	up to 1 hour	1-5 hours	more than 5 hours
(circle) the #	Time it lasts:	1	2	3	4	5

9. Do you have vivid images or hallucinations that are not Vietnam related?

(circle) the #		never	1 x month	1 x every 2 weeks	1-2 x week	3-7 x week	more than once a day
	How often:	0	1	2	3	4	5

(circle) the #		minimal	mild	moderate	severe	extreme
	How intense:	1	2	3	4	5

(circle) the #		up to 60 seconds	1-5 minutes	up to 1 hour	1-5 hours	more than 5 hours
	Time it lasts:	1	2	3	4	5

10. Do you ever feel that you are totally involved with Vietnam images and feelings, but behave normally in your present environment?

(circle) the #		never	1 x month	1 x every 2 weeks	1-2 x week	3-7 x week	more than once a day
	How often:	0	1	2	3	4	5

(circle) the #		minimal	mild	moderate	severe	extreme
	How intense:	1	2	3	4	5

(circle) the #		up to 60 seconds	1-5 minutes	up to 1 hour	1-5 hours	more than 5 hours
	Time it lasts:	1	2	3	4	5

11. Do you have periods of time that you cannot account for, where you just "blank out," don't remember where you were or what was happening?

		never	1 x month	1 x every 2 weeks	1-2 x week	3-7 x week	more than once a day
(circle) the #	How often:	0	1	2	3	4	5

		minimal	mild	moderate	severe	extreme
(circle) the #	How intense:	1	2	3	4	5

		up to 60 seconds	1-5 minutes	up to 1 hour	1-5 hours	more than 5 hours
(circle) the #	Time it lasts:	1	2	3	4	5

12. Do you have disturbing dreams or nightmaes related to Vietnam?

		never	1 x month	1 x every 2 weeks	1-2 x week	3-7 x week	more than once a day
(circle) the #	How often:	0	1	2	3	4	5

		minimal	mild	moderate	severe	extreme
(circle) the #	How intense:	1	2	3	4	5

		up to 60 seconds	1-5 minutes	up to 1 hour	1-5 hours	more than 5 hours
(circle) the #	Time it lasts:	1	2	3	4	5

13. Do you have disturbing dreams or nightmares in general (not about Vietnam)?

		never	1 x month	1 x every 2 weeks	1-2 x week	3-7 x week	more than once a day
(circle) the #	How often:	0	1	2	3	4	5

		minimal	mild	moderate	severe	extreme
(circle) the #	How intense:	1	2	3	4	5

		up to 60 seconds	1-5 minutes	up to 1 hour	1-5 hours	more than 5 hours
(circle) the #	Time it lasts:	1	2	3	4	5

14. Do you have nightmares about Vietnam that involve the same one or two scenes repeatedly?

		never	1 x month	1 x every 2 weeks	1-2 x week	3-7 x week	more than once a day
(circle) the #	How often:	0	1	2	3	4	5

		minimal	mild	moderate	severe	extreme
(circle) the #	How intense:	1	2	3	4	5

		up to 60 seconds	1-5 minutes	up to 1 hour	1-5 hours	more than 5 hours
(circle) the #	Time it lasts:	1	2	3	4	5

15. Have you had nightmares about Vietnam that you don't remember, but know you probably did have the nightmare for one or more of the following reasons:

a) You thrashed around or yelled, or your bed was extremely disheveled, or because someone told you

b) You woke up sweaty, heart pounding, in fear

c) You woke up to find that you destroyed property or hurt yourself or your partner with no memory of how

d) Had incidents where you've actively assaulted someone in your sleep, stopping only when you came fully awake

e) Avoid sleep because you are afraid of having a nightmare about Vietnam

		never	1 x month	1 x every 2 weeks	1-2 x week	3-7 x week	more than once a day
(circle) the #	How often:	0	1	2	3	4	5

		minimal	mild	moderate	severe	extreme
(circle) the #	How intense:	1	2	3	4	5

		up to 60 seconds	1-5 minutes	up to 1 hour	1-5 hours	more than 5 hours
(circle) the #	Time it lasts:	1	2	3	4	5

PLEASE ANSWER THE FOLLOWING QUESTIONS BASED ON YOUR EXPERIENCE DURING THE LAST YEAR (EXCLUDING THE LAST TWO WEEKS)

16. Have you had periods of time during the last 12 months (but not during the last 2 weeks) when you were flooded with painful or disturbing images about Vietnam which repeat over and over and can't get out of your mind?

(circle) the #		never	1 x month	1 x every 2 weeks	1-2 x week	3-7 x week	more than once a day
	How often:	0	1	2	3	4	5

(circle) the #		minimal	mild	moderate	severe	extreme
	How intense:	1	2	3	4	5

(circle) the #		up to 60 seconds	1-5 minutes	up to 1 hour	1-5 hours	more than 5 hours
	Time it lasts:	1	2	3	4	5

17. During the last 12 months (but not the last 2 weeks) have you had any "flashback" experiences as described in Question 8?

(circle) the #		never	1 x month	1 x every 2 weeks	1-2 x week	3-7 x week	more than once a day
	How often:	0	1	2	3	4	5

(circle) the #		minimal	mild	moderate	severe	extreme
	How intense:	1	2	3	4	5

(circle) the #		up to 60 seconds	1-5 minutes	up to 1 hour	1-5 hours	more than 5 hours
	Time it lasts:	1	2	3	4	5

18. During the last 12 months (but not during the last 2 weeks) have you had any disturbing dreams or nightmares about Vietnam?

(circle) the #		never	1 x month	1 x every 2 weeks	1-2 x week	3-7 x week	more than once a day
	How often:	0	1	2	3	4	5

(circle) the #		minimal	mild	moderate	severe	extreme
	How intense:	1	2	3	4	5

(circle) the #		up to 60 seconds	1-5 minutes	up to 1 hour	1-5 hours	more than 5 hours
	Time it lasts:	1	2	3	4	5

19. How well can you CONTROL (SWITCH OFF) disturbing Vietnam images that intrude into your mind? On a scale of 1 to 10, where 1 equals No Control and 10 equals Total Control, please mark how well you can control (switch off) the Vietnam images when you try.

(circle number)

1 2 3 4 5 6 7 8 9 10

no control — total control

20. How relaxed do you feel you can become when you try? On a scale of 1 to 10, where 1 equals not at all relaxed and 10 equals totally relaxed, please circle the number which best describes how well you're able to relax when you try.

1 2 3 4 5 6 7 8 9 10

not at all relaxed — totally relaxed

A P P E N D I X D

PTSD SYMPTOM CHECKLIST

Date _____ Subject # _____

PTSD SYMPTOM CHECKLIST

INSTRUCTIONS

Use the scale on the following page to rate yourself on experiences, behaviors, and feelings that you have had DURING THE LAST 14 DAYS. Each question has two parts. First, circle how often you have each experience, then choose a number representing the intensity of each experience on a scale of 0 to 5, with 0 meaning "doesn't disturb you at all," to 5 meaning "severely disturbing." Choose any number from 0 to 5 which best fits your experience.

	not at all	once or twice a year	once or twice a month	once or twice a week	several times a week	daily or more than once a day
1. Difficulty falling asleep Intensity (0-5) _____	0	1	2	3	4	5
2. Nightmares Intensity (0-5) _____	0	1	2	3	4	5
3. Restless sleep Intensity (0-5) _____	0	1	2	3	4	5
4. Overall level of anxiety Intensity (0-5) _____	0	1	2	3	4	5
5. Anxiety in crowds, stores, open or closed spaces, Orientals, woods, etc. Intensity (0-5) _____	0	1	2	3	4	5
6. Violent thoughts about people you come in contact with Intensity (0-5) _____	0	1	2	3	4	5
7. Violence aimed at objects Intensity (0-5) _____	0	1	2	3	4	5

	not at all	once or twice a year	once or twice a month	once or twice a week	several times a week	daily or more than once a day
8. Fights or other violent incidents Intensity (0-5) _____	0	1	2	3	4	5
9. Outbursts of rage Intensity (0-5) _____	0	1	2	3	4	5
10. Verbally threaten anyone Intensity (0-5) _____	0	1	2	3	4	5
11. Suicidal thoughts or attempts Intensity (0-5) _____	0	1	2	3	4	5
12. Losing self in memories or images about Vietnam Intensity (0-5) _____	0	1	2	3	4	5
13. Flashbacks (thinking or acting as if in Nam, not aware of present) Intensity (0-5) _____	0	1	2	3	4	5
14. Ability to experience emotions Intensity (0-5) _____	0	1	2	3	4	5

	not at all	once or twice a year	once or twice a month	once or twice a week	several times a week	daily or more than once a day
15. Ability to cry Intensity (0-5) _____	0	1	2	3	4	5
16. Awareness of guilt Intensity (0-5) _____	0	1	2	3	4	5
17. Feelings of depression Intensity (0-5) _____	0	1	2	3	4	5
18. Homicidal thoughts or attempts Intensity (0-5) _____	0	1	2	3	4	5
19. Feelings of irritability Intensity (0-5) _____	0	1	2	3	4	5
20. Involvement with weapons Intensity (0-5) _____	0	1	2	3	4	5
21. Hyperalertness Intensity (0-5) _____	0	1	2	3	4	5
22. Exaggerated startle response Intensity (0-5) _____	0	1	2	3	4	5

	not at all	once or twice a year	once or twice a month	once or twice a week	several times a week	daily or more than once a day
23. Appetite disturbance Intensity (0-5) _____	0	1	2	3	4	5
24. Headaches Intensity (0-5) _____	0	1	2	3	4	5
25. Gastro-intestinal problems Intensity (0-5) _____	0	1	2	3	4	5
26. Skin problems Intensity (0-5) _____	0	1	2	3	4	5
27. Chronic physical pain Intensity (0-5) _____	0	1	2	3	4	5
28. Physical shakiness Intensity (0-5) _____	0	1	2	3	4	5
29. Enjoyed an activity alone Intensity (0-5) _____	0	1	2	3	4	5
30. Enjoyed social activity Intensity (0-5) _____	0	1	2	3	4	5

A P P E N D I X E

VIETNAM ERA STRESS INVENTORY

John P. Wilson and Gustave E. Krauss

Part III Specific Stressors in Vietnam

INSTRUCTIONS

Below is a list of questions that are about your experience in Vietnam and what you have thought about them. Please read each one carefully. After you have done so, circle one of the numbered spaces to the right that best describes the frequency that experience happened to you. Circle only one numbered space for each question and do not skip any items.

Frequency for Numbered Spaces

Never - Experience did not occur
Rarely - Experience occurred one time every month
Occasionally - Experience occurred once or two times every two weeks
Often - Experience occurred one or two times each week
Very Often - Experience occurred three or more times each week

---

EXAMPLE

	Never	Rarely	Occasionally	Often	Very Often
	0	1	2	3	4
1. How often do you have backaches?	0	1	2	3	4

Frequency for Numbered Spaces

Never - Experience did not occur
Rarely - Experience occurred one time every month
Occasionally - Experience occurred once or two times every two weeks
Often - Experience occurred one or two times each week
Very Often - Experience occurred three or more times each week

	Never	Rarely	Occasionally	Often	Very Often
1. How often did you fire your weapon at the enemy?	0	1	2	3	4
2. How often did you kill the enemy?	0	1	2	3	4
3. How often did you see someone killed?	0	1	2	3	4
4. How often did you see enemy wounded?	0	1	2	3	4
5. How often did you see our guys wounded?	0	1	2	3	4
6. How often did you see dead enemy?	0	1	2	3	4
7. How often did you see dead Vietnamese?	0	1	2	3	4
8. How often did you see our own dead?	0	1	2	3	4
9. How often did you find yourself in a combat situation in which you thought you would never survive?	0	1	2	3	4
10. How often were you directly involved as a participant in hurting Vietnamese?	0	1	2	3	4

Frequency for Numbered Spaces

Never - Experience did not occur
Rarely - Experience occurred one time every month
Occasionally - Experience occurred once or two times every two weeks
Often - Experience occurred one or two times each week
Very Often - Experience occurred three or more times each week

	Never	Rarely	Occasionally	Often	Very Often
	0	1	2	3	4
11. How often were you indirectly involved as an observer in killing Vietnamese?	0	1	2	3	4
12. In your opinion, how often were you in danger of being killed or wounded in Vietnam?	0	1	2	3	4
13. How often were you unable to identify the enemy upon engaging Vietnamese?	0	1	2	3	4
14. How often were you adequately briefed of military objectives before participation in maneuvers?	0	1	2	3	4
15. How often did you experience frustration over repetitive capture and loss of terrain objectives?	0	1	2	3	4
16. How often did not tactical briefings coincide with you experiences in operations?	0	1	2	3	4
17. How often did you feel that the ARVN were not committed to the defense of South Vietnam?	0	1	2	3	4

Frequency for Numbered Spaces

Never - Experience did not occur
Rarely - Experience occurred one time every month
Occasionally - Experience occurred once or two times every two weeks
Often - Experience occurred one or two times each week
Very Often - Experience occurred three or more times each week

	Never	Rarely	Occasionally	Often	Very Often
	0	1	2	3	4
18. How often did you participate in a body count of enemy dead?	0	1	2	3	4
19. In your opinion, how often was the military objective dependent upon the body count?	0	1	2	3	4
20. How often did you see our guys wounded by anti-personnel devices (booby traps, trip wires, etc.)?	0	1	2	3	4
21. How often did you not find yourself in a safe area (e.g., Saigon, Unit HQ)?	0	1	2	3	4
22. How often did you find yourself in a combat situation in which the enemy attack was unpredictable?	0	1	2	3	4
23. How often did you hear statements made by guys with less than 30 days left in-country (short-timers) which mentioned the loss of a buddy while in Vietnam?	0	1	2	3	4

Frequency for Numbered Spaces

Never - Experience did not occur
Rarely - Experience occurred one time every month
Occasionally - Experience occurred once or two times every two weeks
Often - Experience occurred one or two times each week
Very Often - Experience occurred three or more times each week

	Never	Rarely	Occasionally	Often	Very Often
	0	1	2	3	4
24. How often did you hear statements made by guys (short-timers) which indicated he saw himself as a survivor within his unit?	0	1	2	3	4
25. How often were you bothered by bad climate?	0	1	2	3	4
26. How often were you bothered by bad food?	0	1	2	3	4
27. How often were you bothered by separation from family?	0	1	2	3	4
28. How often were you bothered by separation from friends?	0	1	2	3	4
29. In your opinion, how often were you aware of the controversy the Vietnam war was creating in the U.S.?	0	1	2	3	4
30. In your opinion, how often were you aware of the controversy the Vietnam war was creating in your home community?	0	1	2	3	4
31. How often were you bothered by the insects and fifth?	0	1	2	3	4

Frequency for Numbered Spaces

Never - Experience did not occur
Rarely - Experience occurred one time every month
Occasionally - Experience occurred once or two times every two weeks
Often - Experience occurred one or two times each week
Very Often - Experience occurred three or more times each week

	Never	Rarely	Occasionally	Often	Very Often
	0	1	2	3	4
32. How often were you bothered by the sight and sound of dying people?	0	1	2	3	4
33. How often were you bothered by loss of freedom of movement?	0	1	2	3	4
34. How often were you bothered by not having any girls or sex for one year?	0	1	2	3	4
35. How often were you bothered by lack of privacy?	0	1	2	3	4
36. How often were you bothered by fatigue?	0	1	2	3	4
37. How often were you bothered by long periods of boredom?	0	1	2	3	4
38. How often were you bothered by the threat of disease?	0	1	2	3	4
39. How often were you directly involved as a participant in killing Vietnamese?	0	1	2	3	4
40. How often were you indirectly involved as an observer in hurting Vietnamese?	0	1	2	3	4

Frequency for Numbered Spaces

Never - Experience did not occur
Rarely - Experience occurred one time every month
Occasionally - Experience occurred once or two times every two weeks
Often - Experience occurred one or two times each week
Very Often - Experience occurred three or more times each week

	Never	Rarely	Occasionally	Often	Very Often
	0	1	2	3	4
41. How often were you aware that guys with less than 30 days left in Vietnam acted differently because they were survivors who were going home?	0	1	2	3	4
42. How often were you bothered by the threat of injury?	0	1	2	3	4
43. How often were you bothered by not counting as an individual?	0	1	2	3	4
44. How often were you directly involved in mutilating bodies of Vietnamese? (e.g., cutting off ears, putting heads on sticks, placing bodies in grotesque positions?	0	1	2	3	4
45. How often were you indirectly involved as an observer of the mutilation of bodies of Vietnamese?	0	1	2	3	4

46. Were there any specific events during your tour in Vietnam that were especially difficult for you to cope with emotionally? (Please describe) _____

_____

VIETNAM ERA STRESS INVENTORY

John P. Wilson and Gustave E. Krauss

Part IV VPTSD Stress Assessment Questionnaire Section A

INSTRUCTIONS

Below is a list of problems and complaints that some Vietnam era veterans sometimes have. Please read each one carefully. After you have done so, please circle one of the numbered spaces to the right that best describes HOW MUCH THAT PROBLEM HAS BOTHERED OR DISTRESSED YOU DURING THE PAST TWO WEEKS, INCLUDING TODAY. Circle only one numbered space. Do not skip any items.

EXAMPLE

HOW MUCH WERE YOU BOTHERED BY:	Not at all	A little bit	Moderately	Quite a bit	Extremely
1. Backaches	0	1	2	3	4

HOW MUCH WERE YOU BOTHERED BY:	Not at all	A little bit	Moderately	Quite a bit	Extremely
1. Feeling anxious or nervous	0	1	2	3	4
2. Suicidal thoughts	0	1	2	3	4
3. Problems of concentration	0	1	2	3	4
4. Feeling depressed (down, bummed out)	0	1	2	3	4
5. Thoughts of a buddy killed in Vietnam	0	1	2	3	4

HOW MUCH WERE YOU BOTHERED BY:	Not at all	A little bit	Moderately	Quite a bit	Extremely
6. Asking yourself why a buddy was killed in Vietnam and not you	0	1	2	3	4
7. Feeling guilt that a buddy was killed in Vietnam and not you	0	1	2	3	4
8. Feeling like isolating or withdrawing yourself from others	0	1	2	3	4
9. Having problems going to sleep	0	1	2	3	4
10. Experiencing nightmares of the war	0	1	2	3	4
11. Experiencing anger	0	1	2	3	4
12. Experiencing rage	0	1	2	3	4
13. Experiencing explosive anger	0	1	2	3	4
14. Experiencing sadness over lost buddies that you cannot express	0	1	2	3	4
15. Getting rid of unpleasant thoughts about Vietnam when they come into your head	0	1	2	3	4
16. Feeling numb or nothing inside	0	1	2	3	4
17. Feeling that all of your problems are caused by other people doing things to you	0	1	2	3	4

HOW MUCH WERE YOU BOTHERED BY:	Not at all	A little bit	Moderately	Quite a bit	Extremely
18. The fear of losing control of your impulses (e.g., feelings, emotions)	0	1	2	3	4
19. Mistrusting what others say or do	0	1	2	3	4
20. Memories of Vietnam which just seemed to pop into your head in an unpredictable way	0	1	2	3	4
21. Using alcohol to help you feel better	0	1	2	3	4
22. Using hard drugs to help you feel better (e.g., speed, heroin)	0	1	2	3	4
23. Using military-like self-defense tactics when under stress	0	1	2	3	4
24. War-related thoughts (i.e., memories of Vietnam)	0	1	2	3	4
25. Taking drugs prescribed by a doctor for your emotional upset	0	1	2	3	4
26. Feeling an inability to be close to someone you care about	0	1	2	3	4
27. Feeling that you treat women like sexual objects (i.e., just someone to fuck)	0	1	2	3	4
28. Experiencing sexual problems	0	1	2	3	4

HOW MUCH WERE YOU BOTHERED BY:	Not at all	A little bit	Moderately	Quite a bit	Extremely
29. Feeling alienated from other people	0	1	2	3	4
30. An inability to talk about the war	0	1	2	3	4
31. Experiencing a fear of losing loved ones	0	1	2	3	4
32. Feeling like you lost your romantic, sexual sensitivity in Vietnam	0	1	2	3	4
33. Getting into fights or conflicts with loved ones	0	1	2	3	4
34. Getting into fights with others	0	1	2	3	4
35. Feeling unable to express your real feeling to others	0	1	2	3	4
36. "Flying off the handle" in frustration when things don't go right	0	1	2	3	4
37. Losing your temper and getting out of control	0	1	2	3	4
38. Experiencing problems with your wife or lover	0	1	2	3	4
39. Arguing with your wife or lover	0	1	2	3	4
40. Having a problem trusting others for fear of something bad happening to you	0	1	2	3	4

HOW MUCH WERE YOU BOTHERED BY:	Not at all	A little bit	Moderately	Quite a bit	Extremely
41. Getting nervous around other people who are <u>not</u> Vietnam veterans	0	1	2	3	4
42. Experiencing problems being close to your mother	0	1	2	3	4
43. Experiencing problems being close to your father	0	1	2	3	4
44. Your wife or lover complaining that Vietnam has messed-up your relationship with her	0	1	2	3	4
45. Worrying that Vietnam is affecting the way you relate to your children	0	1	2	3	4
46. Feeling that you are no good and worthless	0	1	2	3	4
47. Problems remembering things you know you should remember	0	1	2	3	4
48. Feeling that you have no real goals that matter	0	1	2	3	4

HOW MUCH WERE YOU BOTHERED BY:	Not at all	A little bit	Moderately	Quite a bit	Extremely
49. Feeling that you are different than you were before going to Vietnam, (i.e., that your sense of identity just won't come together in the right way)	0	1	2	3	4
50. Feeling self-conscious as a Vietnam veteran	0	1	2	3	4
51. Experiencing self-doubt and uncertainty	0	1	2	3	4
52. Feeling that you cannot control the important events in your life	0	1	2	3	4
53. Feeling like you really died in Vietnam and are just a walking "shell" of your old self	0	1	2	3	4
54. Not feeling really satisfied with yourself	0	1	2	3	4
55. Not feeling proud of the kind of person you are	0	1	2	3	4
56. Feeling that you are not a person of worth	0	1	2	3	4
57. Feeling that Vietnam took away your "soul" (i.e., dehumanized you)	0	1	2	3	4

HOW MUCH WERE YOU BOTHERED BY:	Not at all	A little bit	Moderately	Quite a bit	Extremely
58. Feeling that you just cannot get a hold on things	0	1	2	3	4
59. Feeling like you are still searching for something in your life but just cannot seem to find it	0	1	2	3	4
60. Feeling like you've been a failure since leaving military service	0	1	2	3	4
61. Feeling like you would like to "kick some ass" for what happened to you in Vietnam	0	1	2	3	4
62. Having fantasies of retaliation for what happened to you in Vietnam (e.g., blowing up buildings, "flying choppers loaded with weapons, "wasting" government officials	0	1	2	3	4
63. Feeling out of touch (alienated) from the government	0	1	2	3	4
64. The feeling that you are stigmatized for being a Vietnam (Era) veteran	0	1	2	3	4
65. Feeling cynical about governmental processes and policies	0	1	2	3	4

HOW MUCH WERE YOU BOTHERED BY:	Not at all	A little bit	Moderately	Quite a bit	Extremely
66. Feeling like you lost your faith in people after Vietnam	0	1	2	3	4
67. The feeling that you were used by the government for serving in Vietnam	0	1	2	3	4
68. Having problems with persons in authority positions	0	1	2	3	4
69. Feeling that your work is menial and below your capabilities	0	1	2	3	4
70. The wish that you could work in a job that did good for others (i.e., mankind or society)	0	1	2	3	4
71. Feeling uneasy in a crowd such as at a party or movie	0	1	2	3	4
72. Experiencing conflicts with co-workers	0	1	2	3	4
73. Legal problems	0	1	2	3	4
74. The feeling of quitting your job because the work was less than you could do	0	1	2	3	4
75. Feeling that life has no meaning for you	0	1	2	3	4

HOW MUCH WERE YOU BOTHERED BY:	Not at all	A little bit	Moderately	Quite a bit	Extremely
76. Feeling the need to find more purpose in life	0	1	2	3	4
77. Feeling jumpy or jittery, especially when sudden noises occur	0	1	2	3	4
78. Feeling nervous when you hear a helicopter	0	1	2	3	4
79. Driving down the highway and finding yourself searching for ambush spots	0	1	2	3	4
80. Walking in the woods and listening carefully to the sounds around you	0	1	2	3	4
81. Thoughts that it is hard to really believe that Vietnam happened to you	0	1	2	3	4
82. Thoughts that Vietnam is something you still cannot accept in your life	0	1	2	3	4
83. Thoughts that Vietnam was just one great big nightmare	0	1	2	3	4
84. Feeling the need to have a weapon on or near you	0	1	2	3	4
85. Feeling like you drive recklessly	0	1	2	3	4

HOW MUCH WERE YOU BOTHERED BY:	Not at all	A little bit	Moderately	Quite a bit	Extremely
86. The need to engage yourself in dangerous or highly risky adventures in which you feel that you "live on the edge"	0	1	2	3	4
87. The need to seek out high degrees of "sensation" that are inherently risky	0	1	2	3	4
88. The feeling that you are not free to make your own choices important to your life	0	1	2	3	4
89. The feeling that your personal existence (life) is without meaning	0	1	2	3	4
90. The feeling that you should be achieving something	0	1	2	3	4
91. Headaches	0	1	2	3	4
92. Nervousness or shakiness inside	0	1	2	3	4
93. Faintness or dizziness	0	1	2	3	4
94. Pains in heart or chest	0	1	2	3	4
95. Feeling low in energy or slowed down	0	1	2	3	4
96. Trembling	0	1	2	3	4
97. Poor appetite	0	1	2	3	4

HOW MUCH WERE YOU BOTHERED BY:	Not at all	A little bit	Moderately	Quite a bit	Extremely
98. Heart pounding or racing	0	1	2	3	4
99. Nausea or upset stomach	0	1	2	3	4
100. Trouble getting your breath	0	1	2	3	4
101. Hot or cold spells	0	1	2	3	4
102. Numbness or tingling in parts of your body	0	1	2	3	4
103. A lump in your throat	0	1	2	3	4
104. Feeling weak in parts of your body	0	1	2	3	4
105. Awakening in the early morning	0	1	2	3	4
106. Feeling that nothing matters anymore	0	1	2	3	4

APPENDIX F

TREATMENT PROCEDURES

Treatment Schedule for Relaxation Group

Week		Sessions
1	Relaxation Program	2
2	Relaxation Program	2
3	Relaxation Program	2
4	Relaxation Program	2
	Individual sessions for reconstruction of Ideal Scenes	
5	Relaxation Program	2
6	Relaxation Program	2
7	Relaxation Program	2
8	Relaxation Program	2
Sessions	Total	16

Relaxation Program

Step 1: Breath Control

"We are going to start by looking at a spot high up on the wall facing you. We'll be taking 9 very slow deep breaths in groups of 3, and we're going to do the breathing in a very special way that will allow you to relax. Watch me first."

(Demonstration of focusing on spot high on opposite wall, taking a very slow deep inhalation through the nose, and forcefully expelling the breath through pursed lips).

"Let's begin now. Inhaling deeply through your nose--inhaling relxation, and blowing out all the tension and anxiety."

(Do 3 times in succession).

"Now allowing your breath to return to normal. At any point you wish you may want to close your eyes, it's up to you."

"Now again, inhaling deeply..."

(Do 3 times in succession).

"And allowing your breath to return to normal, closing your eyes for a moment or two, beginning to feel the sensations of relaxation. Good."

"And looking up again, inhaling deeply..."

(Do 3 times in succession).

"And allowing your breath to return to normal. Very good."

Step 2: Muscle Tensing and Relaxing (modified Jacobsen approach)

"Clench and tighten your right fist and arm. Hold it tighter and tighter, feel your muscles tense and strain. Now, let go and relax. Notice the difference between how it feels to be tense, and how it feels to relax. Inhaling deeply through your nose, and blowing it out through your mouth. Good."

"Clench and tighten your left fist and arm. Hold it tighter and tighter, feel your muscels tense and strain. Now, let go and relax. Notice the difference between how it feels to be tense and how it feels to relax. Inhaling deeply through your nose, and

blowing it out through your mouth. Good."

"Stretch out and tighten your right leg and foot. Hold it tighter and tighter, feel your muscles tense and strain. Now, let go and relax. Notice the difference between how it feels to be tense and how it feels to relax. Inhaling deeply through your nose, and blowing it out through your mouth. Good."

"Stretch out and tighten your left leg and foot. Hold it tighter and tighter, feel your muscles tense and strain. Now, let go and relax. Notice the difference between how it feels to be tense and how it feels to relax. Inhaling deeply through your nose, and blowing it out through your mouth. Good."

"Clench up and tighten your buttocks, abdomen, chest, and back. Hold it tighter and tighter, feel your muscles tense and strain. Now, let go and relax. Notice the difference between how it feels to be tense and how it feels to relax. Inhaling deeply through your nose, and blowing it out through your mouth. Good."

"Close eyes. Scrunch up your face and lift your shoulders to your ears. Hold it tighter and tighter, feel your muscles tense and strain. Now, let go and relax. Notice the difference between how it feels to be tense and how it feels to relax. Inhaling deeply through your nose, and blowing it out through your mouth. Good."

Step 3: Focusing of Attention

"Now leaving your eyes closed,"

"Focus your attention: On the sounds outside." "What do you hear?"

"Focus your attention: On the sounds in the room."

"Focus your attention: On the feel of relaxing deeper into the chair."

"Focus your attention: On the thoughts and images in your mind."

"Focus your attention: On allowing your thouhts and images to gently come and gently go."

"Focus your attention: On your breath. With every normal breath you take, you go deeper and deeper relaxed."

Step 4: Progressive Relaxation (PR Technique)

"Imagine a comfortably warm, high sun overhead. A very special sun ray will beam down on each part of your body that I mention to you deeply relaxing, warming, massaging, and enveloping each body part as soon as it is mentioned."

"You can feel the warmth of the sunbeam--penetrate and relax, soothe and massage each part of your body."

"And your, e.g., scalp relaxes. The warmth of the sun massages and relaxes your scalp, swirling light of relaxation, circling and soothing all the tension out of your scalp. Your scalp is relaxing."

"Each body part is relaxed from head to toe beginning with "And your _____ relaxes...."

Scalp
Forehead
Temples
Eyebrows
Eyelids
Nose
Ears
Cheeks
Jaw
Lips
Chin
Neck
Shoulders
Upper Back
Middle back
Lower Back
Chest
Abdomen
Upper Arms
Elbows
Forearms
Wrists
Fingers
Buttocks
Thighs
Knees
Chins
Calves
Ankles
Heels
Arches
Balls of Feet
Toes (always last)

Step 5: Ideal Scene Construction

(Experience prior to emerging)

"Everyone has or can create a special private place inside one's mind where only tranquility and serenity exists."

"Find such a place for yourself in a scene of nature. It may be a peaceful place you've been to before you went to Vietnam, or a fantasy land you can create. Imagine such a scene in your mind, now."

"Say the words 'tranquility, serenity, and safety' to yourself. Focus on the feelings these words bring."

"Hear the sounds in this peaceful setting."

"What do you see? Notice the colors and objects."

"Sense the feelings this world brings; tranquility, serenity, and safety."

"Allow your thoughts to gently come and go as you focus more deeply into this scene of nature, and with every breath you take, you find yourself relaxing more and more as your experience an inner sense of tranquility, serenity, and safety."

Step 6: Emerging

"Now begin to emerge from this state of relaxation, maintaining your feelings of calm and relaxation for as long as you wish. At the count of 5, you will open your eyes, feeling refreshed, relaxed, and rejuvenated; completely normal but more relaxed in every beneficial way.

"1, 2, 3, 4, and 5--opening your eyes and returning to the room."

Treatment Schedule for Imagery Group

Week		Sessions
1	Relaxation Program with construction of Ideal Scene	2
2	Relaxation Program Imagery Manipulation Training	2
3	Relaxation Program Affective/Sensory Imagery Training alternating with Ideal Scene	2
4	Relaxation Program/Imagery Training Individual Sessions--Construction of Scene Hierarchies	2
5	Relaxation Program Systematic Desensitization Scene 1, alternating with Ideal Scene	2
6	Relaxation Program Systematic Desensitization Scene 1, alternating with Ideal Scene	2
7	Relaxation Program Systematic Desensitization Scene 2, alternating with Ideal Scene	2
8	Relaxation Program Systematic Desensitization Scene 2, alternating with Ideal Scene	2
	Total	16 Sessions

Imagery Training

Based on: Personal Enrichment through Imagery, Arnold A. Lazarus, Ph.D.)

1. Look at any object. Close your eyes and imagine the object.

   Look at the object again. Imagine it in great detail. Examine it as if taking a mental photograph.

   Close your eyes. See the shapes, color. The image will be vague. Sharpen the image by opening your eyes and noticing details you missed before. Study it carefully, then close your eyes and imagine the object. Is it any clearer?

   Work this way on this object until it becomes clearer in memory.

   Keep your eyes closed or open as you wish. We're going to do two rounds of the breathing technique, 3 slow deep breaths inhaling relaxation through your nose, and blowing out all effort and tension forcefully through your mouth. Beginning now ... (Breathing technique) 2 rounds.

2. Now, select a different object. Relax as completely as you can. Remaining as relaxed as possibile, study the object for one full minute. (pause) Now, close your eyes and imagine the object as clearly as you can while maintaining relaxation.

   Open your eyes and notice areas of error, or areas that you missed. Close your eyes and imagine it again. Is the image growing clearer or sharper? As you practice this exercise, images will become clearer and sharper as you learn to control your thoughts and images in a relaxed state. (You may find the image may be clearer with eyes open, staring at a blank wall).

3. Imagine a dim lightbulb hanging from the ceiling. Imagine it turning red. Picture it turning green. Now turn it into bright white light. Dim the light so that it grows darker and darker.

   Now the dim lightbulb is growing brighter and whiter. See it turning bright red so that everything has a red hue in color. Now see it turning green, so that everything has a green hue in color. Now switch back to a shiny, bright white. Let it grow dimmer and dimmer so that you end up with a dim lightbulb.

4. Close your eyes and imagine a blank white screen (or look at

a blank white wall). Imagine the following colors: blue, green, bright orange, pink, violet, black, yellow, silver, white, brown.

Now let's try a few combinations. Imagine: blue and white, red and green, silver and black.

Are some colors more vivid than others? Are some attached to objects? If you can readily picture one color more easily, practice imagining a difficult one.

5. Imagine seeing a blackboard. See the letters ABC written in white chalk on the blackboard. Using the blackboard eraser, wipe off each letter and see the smudges left.

   See the letter DEF in red chalk. Below that see the letters DEF in yellow chalk. Below that see the letters DEF in green chalk. Can you picture all 3 rows together?

   Erase all letters. (Repeat twice).

   Adapted from: Visualization: Directing the Movies of Your Mind by Adelaide Bry.

6. Pretend your mind is a camera and snap an instant picture or sensation of the following:

   Hear and see a galloping horse.
   See a familiar face.
   See your favorite room.
   See a changing stoplight.
   See and smell your favorite food.
   See and smell a rose.
   Hear the sound of rain on the roof.
   See your "Ideal Scene."
   Feel the feel of running.
   Hear the voice of a friend.
   Feel the feel of soft fur.
   Feel a gentle breeze on your face.
   Taste a potato chip.
   Smell bacon frying.
   Hear a stone dropping into a quiet pond. See the ripples expanding outward.
   Taste a lemon.
   Smell the smell of sweat.
   Feel the muscular feeling of kicking a can.

Imagery Training

Based on: The Power of Pretend by Maurice Rabkin, Ph.D.

EXERCISE SEQUENCE: SIMPLE PRETENDING, OBJECTS

Step 1: Pretend that you are holding an apple in your hand. Notice its color, its shape, its weight, the texture of its skin, whether or not it has a stem.

Pretend its taste.

Step 2: Stop pretending the apple.

This is an extremely important step. Let yourself be aware:

a. that you stopped pretending the apple;

b. how you know that you've stopped (what are the differences in body cues between a. and b.?);

c. how you managed to stop pretending the apple (this may be difficult, just see what you can find out);

d. what you are aware of when you have stopped pretending the apple.

Other Objects

a plastic cube

a green candle

a red flower

a circus tent

a blue automobile, etc., etc.

a familiar set of keys

CHANGING: SIMPLE PRETENDING

Step 1. With your eyes open, will you pretend that you are looking at an apple.
Step 2. Will you stop pretending that you are looking at an apple.
Step 3. Will you pretend that you are looking at an apple.
Step 4. Will you pretend that the apple changes into a grapefruit.
Step 5. Will you pretend that the grapefruit changes into a banana.
Step 6. Will you stop pretending the banana.
Step 7. Will you pretend that you're looking at a banana.
Step 8. Will you pretend that the banana changes into a pumpkin.
Step 9. Will you pretend that the pumpkin changes into a cherry.
Step 10. Will you pretend that the cherry changes into a pumpkin.
Step 11. Will you pretend that the pumpkin changes into a banana.
Step 12. Will you stop pretending the banana.

Notes

You can continue with the variation on changing simple pretends until the group is comfortable about this. The second part should be done with the eyes closed.

Step 1. Will you pretend that you are lying on the grass in the park.
Step 2. Will you pretend that the time is the spring and that the grass is green.
Step 3. Now will you pretend that the grass turns purple.
Step 4. Now will you pretend that the grass turns yellow.
Step 5. Now will you stop pretending that the grass is yellow.
Step 6. Now will you pretend that the grass is green.
Step 7. Now will you pretend that the grass turns to pink.
Step 8. Now will you pretend that the grass turns to black.
Step 9. Now will you pretend that the grass turns colorless.
Step 10. Now will you pretend that the grass turns blue.
Step 11. Now will you stop pretending the grass.
Step 12. Now will you stop pretending it's early spring.
Step 13. Will you stop all pretending that you've done since the start of this exercise.

SIMPLE PRETEND WITH SENSES

Step 1. Pretend that you are eating an ice cream cone. [pause].
Now will you stop pretending that you are eating an ice cream cone.

Step 2. Pretend that you are holding a rare object of art in your right hand. [pause]
Notice its shape, its color, its weight, its texture. [pause]
Now, will you stop pretending that you are holding this object in your hand.

Step 3. Pretend that you hear the phone ring. [pause]
Now will you stop pretending that you hear the phone ringing. Notice what happened.

EXERCISE: DIRECT CONTACT WITH MOOD AND BODY FEELINGS

Body States

Step 1. Pretend that you're hungry. Notice your body sensations and your mood. Now, stop pretending you are hungry.

Step 2. Pretend that you are thirsty. Notice your body sensations and your mood. Stop pretending you are thirsty.

Step 3. Pretend that you are very cold. Notice your body sensations and your mood. Stop pretending you are very cold.

Step 4. Pretend that you are very tired. Notice your body sensations and your mood. Stop pretending you are very tired. Observe your body sensations and your mood.

Step 5. Pretend that you are full of energy. Notice your body sensations and your mood.

Step 6. Pretend that you are sleeping. Notice your body sensations and your mood. Stop pretending you are sleeping. Observe your body sensations and mood.

Step 7. Pretend that you are calm and relaxed. Notice your body sensations and your mood. Stop pretending you are calm and relaxed. Observe your body sensations and your mood.

Moods

Step 1. Pretend that you are very angry. Notice your body sensations and your mood. Stop pretending you are very angry. Observe your body sensations and your mood.

Step 2. Pretend that you are terrified. Notice your body sensations and your mood. Stop pretending you are terrified. Observe your body sensations and your mood.

Step 3. Pretend that you are lonely. Notice your body sensations and your mood. Stop pretending you are lonely. Observe your body sensations and your mood.

Step 4. Pretend that you are depressed. Notice your body sensations and your mood. Stop pretending you are depressed. Observe your body sensations and your mood.

Step 5. Pretend that you are eagerly excited. Notice your body sensations and your mood. Stop pretending you are eagerly excited. Observe your body sensations and your mood.

Step 6. Pretend that you are "turned on." Notice your body sensations and your mood. Stop pretending you are "turned on." Observe your body sensations and your mood.

Step 7. Pretend that you are joyful. Notice your body sensations and your mood. Stop pretending that you are joyful. Observe your body sensations and your mood.

Step 8. Stop all pretending you have been doing since the beginning of this exercise.

Notes

(a) In what way do body sensations "dictate" mood for you?

(b) Do you establish mood or do you "respond" to body signals?

(c) Are some moods more "familiar" than others?

(d) Notice your response to these thoughts. Is it a "familiar" one?

EXERCISE: DIRECT CONTACT WITH MOODS

Step 1. Will you pretend that you are feeling angry? [pause] Notice what accompanies this pretend.

Step 2. Pretend you are feeling:

Other Moods

Sad	Jealous
Gleeful	Irritated
Calm	Depressed
Humiliated	Joyful
Proud	Anxious
Happy	Cheerful
Serene	Hopeful

Imagery Training

Based on: Personal Enrichment Through Imagery
Arnold A. Lazarus, Ph.D.

1. Think of the house you lived in when you were 10 years old. Think of the main room the family gathered in. Imagine much of the situation as it was then. As a starting point, ask yourself how many windows were in that room. [pause] Notice how the recollection of the house stays in your mind, at least clearly enough to count the windows.

2. Think about your future. Imagine a day in you life 8 years from now. What changes will have come about? Focus on two things. First, what you expect to happen as your life unfolds [pause], and then follow this with images of what you desire.

3. Think about something that makes you annoyed. One which causes you to feel some real anger or hostility. Take a few minutes to evoke a realistic and vivid an image as possible. [pause]
What happened when you imagined something that makes you annoyed. Did you see faces, hear words or sentences? The pattern of images tells you something about how your mind works.
If you really concentrate on obvious or subtle changes in your body while you're thinking about the situation which makes you angry, you'll notice that you feel tensed up. Your stomach may feel tight, your breathing and heart rate speed up. Angry thoughts typically have these effects on people. Focusing on anger brings a state of tension.

   The more you focus on angry thoughts, the more tense you feel. The opposite is true as well. The more you focus on positive/relaxed thoughts, the calmer you feel.

4. Think of something that makes you feel relaxed, calm. It could be one of "Ideal Scenes" or another scene which is pleasant and comfortable to be part of. Project yourself into the scene. [pause] How does this compare with your angry image? How does your body react? Does your body feel calmer, more relaxed? Do you feel more relaxed in general? You have the power to choose how you feel by deliberately focusing on particular thoughts. Angry thoughts and images will make you wired. Pleasant or positive thoughts and images will make you feel relaxed.

SCENE CONSTRUCTION FOR SYSTEMATIC DESENSITIZATION HIERARCHY

Now I'd like to ask you about events in Vietnam that were most disturbing to you. They might have been something about the war and combat, or events involving the enemy or friends, or anything you personally reacted to. Sometimes it takes a while to remember things that happened so long ago, but the events I'd like you to tell me about now are very disturbing events that you have re-experienced repeatedly since the war and even in your present life in memories, intrusive thoughts, nightmares, or flashbacks. Take a minute and think about three disturbing events that are related to your experience in Vietnam and are the most upsetting to you since your return from Vietnam. In a minute I'll ask you to briefly describe them. Let me know when you are ready.

Okay, let's start with the first one. (Then the second event, then the third event).

Event #1: Description

Event #2: Description

Event #3: Description

Which of these three events is the most disturbing to you?

On a scale of 1-10, with 10 being the most upsetting you can imagine yourself, and 1 being not at all upset, how would you rate how disturbing this event is to you?

Which is the second most disturbing event?

On the same 1-10 scale, rate how upset you currently are about the event.

Now rate how upset you currently are on the least disturbing scene, on the same 1-10 scale.

Now you are going to choose the 2 scenes that we'll be working with. We're going to call the least disturbing event Scene 1 and the most disturbing event Scene 2.

Now, beginning with Scene 1 (the least disturbing event) let's run through the scene and divide the scene into segments.

a) part 1 b) part 2

(This is repeated with Scene 2)

Systematic Desensitization Procedures

Weeks 6-10

Each session commenced with the Relaxation Procedure.

Then, each veteran experienced his "Ideal Scene."

Now we're going to focus attention on Scene 1 (your least disturbing event).

The following statements were made to the group:

It's okay while in your safe place to know that you have a painful memory. And it's okay to look at that memory while in your safe place because looking at it helps reduce the pain. I'll take you through your memory and we can go through it, it can be re-experienced while you are in your safe place. Before we begin, let's set the stage for what happened. Remember we are only focusing attention on Scene 1 for now.

Where are you during Scene 1?

What was the terrain like? Take a look around.

What was the weather like?

What equipment did you have?

Who else was there? Can you see whoever else was there?

What time of day or night did it begin?

Okay, let's start your memory of Scene 1. Where were you when it began?

It has begun. What is happening?

What do you hear as it begins?

What do you see?

What do you feel?

Are there other people? What's happening with them as it begins?

You are a quarter of the way through your memory now. What's happening?
What do you see?

What are you hearing?

What are you trying to do?

What are you feeling?

What is happening with anyone else around?

You are half way through your memory now...Return to your Ideal Scene. Then, going back now to your scene, you are half way through the scene. See where you left off. Where are you now? Then,

What does it sound like?

What do you see around you?

What are you doing?

How do you feel?

Can you smell anything?

More than half way through now. What's happening?

What do you see?

What do you hear?

What are you doing?

What are any others doing?

What are your feelings?

It's ending--it is just about finished.

What do you see?

What do you smell?

What have you done?

How do you feel?

Where are you going, now that it is ending?

It's over, it's past.

Going back to your "Ideal Scene" to your place of tranquility, serenity, and safety. Feeling calm and relaxed and comfortable in

your place of safety. Settle in and take a look around. What do you hear, what do you see? How do you feel in this calm, relaxing place? Be there completely.

(Run through Scene 1 twice more).
(The same procedure was repeated for Scene II.)

A P P E N D I X G

PRESENTATION OF TABLES

TABLE 1

Summary of Demographic Characteristics of Study Participants

Demographic Characteristic	Group 1	Group 2
Birth Order		
Oldest	1	3
Middle	4	2
Youngest	1	2
Only	1	0
Education		
Less than High School	0	0
GED	1	1
High School Graduate	1	1
More	5	5
Marital Status		
Married (living with)	2	1
Remarried	2	2
Separated	1	1
Living (with)	2	1
Never Married	0	2
Living Situation		
Alone	2	1
With Relative	0	1
With Significant Other	5	5
Number of Children		
0	2	1
1	1	2
2	1	1
3	3	3

TABLE 1 (Continued)

Demographic Characteristic	Group 1	Group 2
Service		
Army	3	4
Marines	4	3
Disabled		
Yes	6	5
No	1	2
Wounds		
Yes	4	3
No	3	4
Treated		
Yes	3	2
No	4	5

TABLE 2

Cronbach Alpha Reliability Coefficients for Each of the Pretest and Posttest Dependent Measures

Questionnaire	Pretest	Posttest
Imagery		
Frequency	α .848	α .882
Intensity	α .857	α .802
Duration	α .938	α .969
PTSD		
Frequency	α .860	α .850
Intensity	α .858	α .796
VESI-4		
Frequency	α .950	α .977
VESI-3		
Frequency	α .663	

TABLE 3

Summary of Group x Time ANOVAs for Each of the Dependent Measures

	Source	Sum of Squares	df	Mean Squares	F	1-tail probability
Imagery Frequency						
	Group	424.321	1	424.321	1.49	.246
	Time	78.893	1	78.893	.56	.469
	Group x Time	10.321	1	10.321	.07	.792
Imagery Intensity						
	Group	1106.286	1	1106.286	5.51	.037*
	Time	46.286	1	46.286	.67	.430
	Group x Time	2.286	1	2.286	.03	.859
Imagery Duration						
	Group	2143.750	1	2143.750	3.87	.073
	Time	15.750	1	15.750	.13	.727
	Group x Time	34.321	1	34.321	.28	.607
PTSD Frequency						
	Group	1068.893	1	1068.893	2.02	.181
	Time	594.321	1	594.321	3.50	.086
	Group x Time	246.036	1	246.036	1.45	.252
PTSD Intensity						
	Group	2040.036	1	2040.036	4.29	.061
	Time	440.036	1	440.036	2.45	.143
	Group x Time	540.321	1	540.321	3.01	.108
VESI-4						
	Group	12986.036	1	12986.036	2.75	.123
	Time	2780.036	1	2780.036	1.02	.332
	Group x Time	234.321	1	234.321	.09	.774

TABLE 3 (continued)

	Source	Sum of Squares	df	Mean Squares	F	1-tail probability
Control Question						
	Group	4.321	1	4.321	.60	.774
	Time	26.036	1	26.036	24.85	.0003**
	Group x Time	.893	1	.893	.85	.3741
Relaxation Question						
	Group	4.321	1	4.321	.75	.404
	Time	85.750	1	85.750	30.26	.0001**
	Group x Time	1.750	1	1.750	.62	.447

* $p \leq .05$
** $p \leq .01$

TABLE 4

Means, Medians, and Standard Deviations of Imagery Questionnaire Scales
(N = 14)

	Imagery					
	Frequency		Intensity		Duration	
	Pre	Post	Pre	Post	Pre	Post
Mean	58.21	54.86	63.71	61.14	48.86	47.36
Median	62.00	51.50	65.50	60.00	44.50	45.50
SD	15.08	14.13	14.61	11.00	18.90	20.87
Number of Questions	18	18	18	18	18	18

TABLE 5

Means, Medians, and Standard Deviations of PTSD Questionnaire Scales ($N = 14$)

	PTSD			
	Frequency		Intensity	
	Pre	Post	Pre	Post
Mean	95.71	86.50	103.50	95.57
Median	97.50	79.00	109.83	90.50
SD	20.22	18.37	21.69	18.22
Number of Questions	30	30	30	30

TABLE 6

Total Group Means, Medians, and Standard Deviations of Dependent Measures
(N = 14)

	Imagery		PTSD		VESI-4		VESI-3
	Pre	Post	Pre	Post	Pre	Post	Pre
Mean	170.79	163.36	199.21	182.07	299.36	279.43	115.42
Median	173.50	152.00	202.50	171.00	308.50	259.50	111.50
SD	44.35	42.89	40.18	35.92	51.65	72.66	13.21
Number of Questions	54	54	60	60	106	106	45

TABLE 7

Means, Medians, and Standard Deviations of Imagery Questionnaire Scales by Group

	Imagery					
	Frequency		Intensity		Duration	
	Pre	Post	Pre	Post	Pre	Post
Group 1 (N = 7)						
Mean	62.71	58.14	69.71	67.71	58.71	55.00
Median	65.00	59.00	70.00	67.00	60.00	63.00
SD	15.14	18.73	10.42	9.90	14.40	22.15
Number of Questions	18	18	18	18	18	18
Group 2 (N = 7)						
Mean	53.71	51.57	57.71	54.57	39.00	39.71
Median	61.00	50.75	65.00	57.00	33.00	36.00
SD	14.69	7.53	16.43	7.98	18.43	17.79
Number of Questions	18	18	18	18	18	18

TABLE 8

Means, Medians, and Standard Deviations of PTSD Questionnaire Scales by Group

	Frequency		Intensity	
	Pre	Post	Pre	Post
Group 1 (N = 7)				
Mean	104.86	89.71	116.43	89.71
Median	107.00	80.00	112.00	90.00
SD	15.29	21.68	8.66	21.68
Number of Questions	30	30	30	30
Group 2 (N = 7)				
Mean	86.57	83.29	90.57	83.29
Median	91.00	78.00	101.00	98.00
SD	21.38	15.39	23.54	15.39
Number of Questions	30	30	30	30

TABLE 9

Means, Medians, and Standard Deviations of VESI-3 and VESI-4 Questionnaires by Group

	VESI-4		VESI-3
	Pre	Post	Pre
Group 1 (N = 7)			
Mean	318.00	303.86	117.00
Median	326.00	297.00	114.00
SD	46.80	67.48	11.50
Number of Questions	106	106	45
Group 2 (N = 7)			
Mean	280.71	255.00	113.86
Median	264.00	258.00	107.00
SD	51.46	74.10	15.49
Number of Questions	106	106	45

TABLE 10

Mean and Standard Deviation of "Relaxed" and "Control" Questions by Group

Group	Pretest	Posttest
Relaxed Group 1		
Mean	1.571	5.571
Standard Deviation	.787	2.820
N	7	7
Relaxed Group 2		
Mean	2.857	5.857
Standard Deviation	2.116	2.035
N	7	7
Control Group 1		
Mean	1.714	3.286
Standard Deviation	1.112	1.890
N	7	7
Control Group 2		
Mean	2.143	4.429
Standard Deviation	2.268	2.573
N	7	7

TABLE 11

Total Group Means and Standard Deviations of "Relaxed" and "Control" Questions

	Relaxed		Control	
	Pretest	Posttest	Pretest	Posttest
Mean	2.214	5.714	1.927	3.857
Standard Deviation	1.672	2.367	1.730	2.248
N	14	14	14	14

TABLE 12

Intercorrelations of Scales, Pre- and Posttest

	Relaxation Question/Pre	Relaxation Question/Post	Control Question Pre	Control Question Post	Imagery Frequency Total/Pre	Imagery Frequency Total/Post	Imagery Intensity Total/Pre	Imagery Intensity Total/Post	Imagery Duration Total/Pre	Imagery Duration Total/Post	PTSD Frequency Total/Pre	PTSD Frequency Total/Post	PTSD Intensity Total/Pre	PTSD Intensity Total/Post	VESI-4 Total/Pre	VESI-4 Total/Post	VESI-3 Total	Imagery Total Pre	Imagery Total Post	PTSD Total Pre	PTSD Total Post
Relax/Pre	1.00	.37	.62**	.58	-.07	-.13	-.03	-.23	-.25	-.18	-.43	-.40	-.32	-.24	-.27	-.57*	-.22	-.14	-.19	-.39	-.33
Relax/Post	.37	1.00	.33	.43	-.22	-.76**	-.12	-.49*	-.45	-.70**	-.46*	-.41	-.17	-.36	-.61*	-.38	.10	-.30	-.71**	-.32	-.39
Control/Pre	.62**	.33	1.00	.77	-.26	-.10	-.15	-.10	-.27	-.10	-.56*	-.39	-.33	-.39	-.42	-.45	-.09	-.25	-.11	-.46*	-.40
Control/Post	.58*	.43	.77**	1.00	-.45	-.02	-.31	-.20	-.49*	-.16	-.58*	-.29	-.38	-.31	-.36	-.50*	-.05	-.46*	-.14	-.49*	-.30
Imagery/Freq/Pre	-.07	-.22	-.26	-.45	1.00	.39	.91**	.55*	.63**	.41	.70**	.09	-.60*	.11	.62**	.04	-.37	.91**	.47*	.68**	.10
Imagery/Freq/Post	-.13	-.76**	-.10	-.02	.39	1.00	.42	.73**	.57*	.81**	.57*	.43	.41	.43	.75**	.31	-.07	.51*	.91**	.51	.44
Imagery/Inten/Pre	-.03	-.12	-.15	-.31	.91**	.42	1.00	.64**	.74**	.54*	.76**	.11	.79**	.19	.67**	.10	-.18	.95**	.56*	.81**	.15
Imagery/Inten/Post	-.23	-.49*	-.10	-.20	.55*	.73**	.64**	1.00	.78**	.82**	.67**	.45	.72**	.49*	.78**	.39	-.26	.73**	.90**	.73**	.48*
Imagery/Dur/Pre	-.25	-.45	-.27	-.49	.63**	.57*	.74**	.78**	1.00	.71**	.85**	.32	.74**	.38	.81**	.44	-.02	.89**	.73**	.83**	.36
Imagery/Dur/Post	-.18	-.70**	-.10	-.16	.41	.81**	.54*	.82**	.71**	1.00	.62**	.41	.52*	.45	.82**	.33	-.24	.62**	.96**	.59*	.44
PTSD/Freq/Pre	-.43	-.46*	-.56*	-.58*	.70**	.57*	.76**	.67**	.85**	.62	1.00	.53*	.84**	.49*	.91**	.51*	-.03	.85**	.66**	.96**	.52*
PTSD/Freq/Post	-.40	-.41	-.39	-.29	.09	.43	.11	.45	.32	.41	.53*	1.00	.44	.93**	.53*	.85**	-.06	.20	.46	.51*	.98**
PTSD/Inten/Pre	-.32	-.17	-.33	-.38	.60*	.41	.79**	.72**	.74**	.52*	.84**	.44	1.00	.49*	.70**	.45	.12	.78**	.57	.96**	.48*
PTSD/Inten/Post	-.24	-.36	-.39	-.31	.11	.43	.19	.49*	.38	.45	.49*	.93**	.49*	1.00	.49*	.86**	.04	.26	.49*	.51*	.98**
VESI-4/Pre	-.27	-.61*	-.42	-.36	.62**	.75**	.70**	.78**	.81**	.82**	.91**	.53*	.70**	.49*	1.00	.38	-.26	.78**	.84**	.83**	.52*
VESI-4/Post	-.57*	-.38	-.45	-.50*	.04	.31	.10	.39	.44	.33	.51*	.85**	.45	.86**	.38	1.00	.30	.23	.37	.50*	.87**
VESI-3/Total	-.22	.10	-.09	-.05	-.37	-.07	-.18	-.26	-.02	-.24	-.03	-.06	.12	.04	-.26	.30	1.00	-.19	-.21	.05	-.01
Imagery/Total/Pre	-.14	-.30	-.25	-.46*	.91**	.51*	.95**	.73**	.89**	.62**	.85**	.20	.78**	.26	.78**	.23	-.19	1.00	.66**	.85**	.23
Imagery/Total/Post	-.19	-.71**	-.11	-.14	.47*	.91**	.56*	.90**	.73**	.96**	.66**	.46	.57*	.49*	.84**	.37	-.21	.66**	1.00	.64**	.48*
PTSD/Total/Pre	-.39	-.32	-.46*	-.49*	.68**	.51*	.81**	.73**	.83**	.59*	.96**	.51*	.96**	.51*	.83**	.50*	.05	.85**	.64**	1.00	.52*
PTSD/Total/Post	-.33	-.39	-.40	-.30	.10	.44	.15	.48*	.36	.44	.52*	.98**	.48*	.98**	.52*	.87**	-.01	.23	.48*	.52*	1.00

*P ≤ .05

**P ≤ .01

TABLE 13

Reliability Tables

Imagery Frequency Pre-Questionnaire	Means	Standard Deviations	Correlated Item Total Correlations
I1	4.43	.76	.30
I2	3.93	1.33	.55
I3	4.07	1.14	.60
I4	3.43	1.74	.37
I5	3.71	1.33	.68
I6	3.50	1.22	.52
I7	3.86	1.46	.67
I8	2.29	1.77	.67
I9	2.21	2.01	.22
I10	2.57	1.95	.17
I11	2.93	1.98	.53
I12	3.43	1.34	.22
I13	1.64	1.78	.14
I14	2.79	1.76	.40
I15	2.93	1.77	.51
I16	4.14	1.17	.65
I17	2.86	1.83	.80
I18	3.50	1.56	.43

TABLE 14

Reliability Tables

Imagery Intensity Pre-Questionnaire	Means	Standard Deviations	Correlated Item Total Correlations
I19	3.71	.99	.54
I20	4.14	1.03	.57
I21	4.14	.77	.61
I22	3.57	1.22	.65
I23	3.79	1.31	.77
I24	3.86	.66	.75
I25	4.00	1.30	.80
I26	3.36	2.24	.60
I27	2.14	1.79	.48
I28	2.79	2.01	.23
I29	3.00	1.80	.43
I30	3.93	1.27	.03
I31	1.93	1.64	.06
I32	3.43	1.99	.35
I33	3.36	1.95	.56
I34	4.57	.65	.75
I35	3.71	1.68	.67
I36	4.29	1.38	.52

TABLE 15

Reliability Tables

Imagery Duration Pre-Questionnaire	Means	Standard Deviations	Correlated Item Total Correlations
I37	2.71	1.49	.75
I38	2.86	1.29	.83
I39	3.00	1.11	.91
I40	2.64	1.39	.77
I41	3.36	1.45	.78
I42	3.00	1.24	.65
I43	3.14	1.61	.78
I44	2.29	1.73	.58
I45	1.79	1.58	.66
I46	2.36	1.82	.29
I47	2.29	1.59	.49
I48	2.71	1.33	.77
I49	1.93	1.54	.59
I50	2.43	1.65	.75
I51	2.50	1.70	.83
I52	3.86	1.23	.61
I53	2.79	1.72	.41
I54	3.21	1.42	.65

TABLE 16

Reliability Tables

Imagery Frequency Post-Questionnaire	Means	Standard Deviations	Correlated Item Total Correlations
I55	3.86	.86	.53
I56	3.71	1.27	.35
I57	3.79	.97	.54
I58	3.43	1.40	.49
I59	3.29	1.14	.80
I60	3.29	1.38	.45
I61	3.64	1.22	.56
I62	1.71	1.54	.69
I63	1.93	1.77	.55
I64	2.79	1.89	.15
I65	1.79	1.72	.82
I66	3.21	1.12	.67
I67	2.43	1.55	.28
I68	2.86	1.56	.68
I69	3.07	1.14	.50
I70	3.79	.89	.52
I71	3.00	1.24	.58
I72	3.29	1.27	.36

TABLE 17

Reliability Tables

Imagery Intensity Post-Questionnaire	Means	Standard Deviations	Correlated Item Total Correlations
I73	3.57	.51	.37
I74	3.93	.73	.04
I75	3.71	.83	.75
I76	3.57	1.09	.63
I77	3.79	.80	.08
I78	3.43	.65	.71
I79	3.43	1.09	.46
I80	3.00	1.92	.16
I81	1.93	1.82	.61
I82	2.50	1.61	.14
I83	2.00	1.88	.74
I84	3.64	1.39	.41
I85	2.86	1.66	.24
I86	3.93	1.54	.36
I87	3.93	1.14	.57
I88	4.07	.83	.51
I89	3.86	.95	.33
I90	4.00	1.18	.41

TABLE 18

Reliability Tables

Imagery Duration Post-Questionnaire	Means	Standard Deviations	Correlated Item Total Correlations
I91	2.21	1.25	.86
I92	2.57	1.16	.81
I93	2.64	1.22	.92
I94	2.71	1.54	.86
I95	3.21	1.25	.65
I96	2.64	1.34	.84
I97	3.50	1.34	.68
I98	2.14	1.66	.78
I99	1.43	1.45	.81
I100	2.14	1.56	.68
I101	1.86	1.70	.87
I102	2.86	1.56	.81
I103	2.21	1.63	.67
I104	2.86	1.66	.80
I105	2.86	1.46	.88
I106	3.43	1.16	.73
I107	3.07	1.14	.85
I108	3.00	1.47	.79

TABLE 19

Reliability Tables

PTSD Frequency Pre-Questionnaire	Means	Standard Deviations	Correlated Item Total Correlations
PTSD1	3.86	1.35	.44
PTSD2	3.36	1.22	.28
PTSD3	4.07	1.14	.24
PTSD4	4.64	.50	.51
PTSD5	4.50	.65	.26
PTSD6	3.50	1.22	.31
PTSD7	2.93	1.78	.70
PTSD8	1.79	1.93	.51
PTSD9	3.14	1.70	.81
PTSD10	2.36	1.78	.47
PTSD11	1.57	1.34	.22
PTSD12	4.29	.61	.14
PTSD13	2.86	1.75	.66
PTSD14	2.58	2.03	.27
PTSD15	1.79	1.81	.15
PTSD16	3.71	1.14	.06
PTSD17	4.00	1.04	.13
PTSD18	2.64	1.50	.61
PTSD19	4.00	.96	.22
PTSD20	1.43	1.55	.46
PTSD21	4.71	.47	.50
PTSD22	3.86	1.75	.70
PTSD23	4.14	1.03	.23
PTSD24	3.50	1.74	.26
PTSD25	2.71	1.98	.79
PTSD26	2.50	2.07	.53
PTSD27	2.64	2.02	.55
PTSD28	3.58	1.50	.61
PTSD29	2.93	1.90	-.03
PTSD30	2.14	1.83	.04

TABLE 20

Reliability Tables

PTSD Intensity Pre-Questionnaire	Means	Standard Deviations	Correlated Item Total Correlations
PTSD31	3.93	1.33	.15
PTSD32	3.86	1.35	-.08
PTSD33	3.93	1.27	.00
PTSD34	4.36	.63	.55
PTSD35	4.29	.83	.18
PTSD36	3.57	1.50	.35
PTSD37	3.14	1.75	.79
PTSD38	3.43	1.87	.75
PTSD39	3.79	1.81	.78
PTSD40	3.14	1.88	.63
PTSD41	2.36	1.86	.31
PTSD42	4.29	1.07	.20
PTSD43	3.43	1.74	.73
PTSD44	3.14	1.96	.27
PTSD45	2.21	2.29	.08
PTSD46	3.86	1.51	.05
PTSD47	4.36	.84	.03
PTSD48	3.36	1.74	.78
PTSD49	4.00	.88	.33
PTSD50	2.86	2.07	.42
PTSD51	4.43	1.40	.74
PTSD52	3.93	1.77	.78
PTSD53	3.71	1.64	-.06
PTSD54	3.64	1.74	.32
PTSD55	2.86	1.92	.75
PTSD56	2.21	1.85	.61
PTSD57	2.79	2.19	.36
PTSD58	3.43	1.55	.44
PTSD59	2.93	1.64	.11
PTSD60	2.29	1.82	.01

TABLE 21

Reliability Tables

PTSD Frequency Post-Questionnaire	Means	Standard Deviations	Correlated Item Total Correlations
PTSD61	3.86	.86	.43
PTSD62	3.07	1.27	.62
PTSD63	3.57	1.22	.68
PTSD64	4.50	.76	.40
PTSD65	4.00	1.11	.12
PTSD66	3.36	1.39	.64
PTSD67	2.64	1.45	.48
PTSD68	1.86	1.66	.52
PTSD69	2.93	1.07	.73
PTSD70	2.57	1.09	.66
PTSD71	1.71	1.49	.33
PTSD72	3.93	.83	.53
PTSD73	2.21	1.37	.28
PTSD74	2.43	1.50	.25
PTSD75	1.36	1.50	.36
PTSD76	3.07	1.64	.61
PTSD77	4.00	1.04	.71
PTSD78	3.07	1.54	.35
PTSD79	4.29	.83	.62
PTSD80	2.50	1.91	.27
PTSD81	4.14	.86	.36
PTSD82	3.57	.94	.43
PTSD83	2.93	1.49	.51
PTSD84	2.86	1.83	.52
PTSD85	1.43	1.79	.65
PTSD86	2.29	2.05	-.04
PTSD87	2.43	2.41	.40
PTSD88	2.93	1.38	.53
PTSD89	2.57	1.87	-.25
PTSD90	1.57	1.50	-.29

TABLE 22

Reliability Tables

PTSD Intensity Post-Questionnaire	Means	Standard Deviations	Correlated Item Total Correlations
PTSD91	3.64	.93	.25
PTSD92	4.00	1.41	.43
PTSD93	3.79	1.48	.55
PTSD94	4.07	1.07	.63
PTSD95	4.14	1.23	.08
PTSD96	3.64	1.22	.55
PTSD97	3.43	1.70	.09
PTSD98	2.50	2.03	.52
PTSD99	3.86	1.35	.34
PTSD100	3.14	1.66	.72
PTSD101	2.43	1.87	.04
PTSD102	3.86	.86	.69
PTSD103	3.00	1.76	.19
PTSD104	2.43	1.87	.04
PTSD105	2.00	2.11	.24
PTSD106	3.21	1.76	.11
PTSD107	4.21	.80	.69
PTSD108	3.50	1.74	.39
PTSD109	4.36	.84	.57
PTSD110	2.36	2.17	.30
PTSD111	4.50	.65	.51
PTSD112	3.93	.92	.35
PTSD113	3.21	1.25	.43
PTSD114	2.93	1.90	.62
PTSD115	1.50	1.91	.65
PTSD116	2.43	2.17	.01
PTSD117	2.29	2.23	.40
PTSD118	3.14	1.51	.48
PTSD119	2.57	1.99	-.23
PTSD120	1.50	1.51	-.12

TABLE 23

Reliability Tables

VESI-4 Pre-Questionnaire	Means	Standard Deviations	Correlated Item Total Correlations
VESI-4 1	3.57	.65	.57
VESI-4 2	1.36	1.28	.03
VESI-4 3	3.36	.63	.26
VESI-4 4	3.36	.93	.68
VESI-4 5	3.50	.65	.18
VESI-4 6	3.21	1.12	.41
VESI-4 7	3.00	1.52	.51
VESI-4 8	3.07	1.00	.26
VESI-4 9	3.21	1.12	.41
VESI-4 10	2.71	1.33	.60
VESI-4 11	3.29	.91	.53
VESI-4 12	2.21	1.31	.62
VESI-4 13	2.07	1.49	.75
VESI-4 14	3.36	1.01	.55
VESI-4 15	2.86	1.41	-.03
VESI-4 16	3.43	.65	.36
VESI-4 17	2.29	1.44	.74
VESI-4 18	3.43	.65	.22
VESI-4 19	3.43	.94	.53
VESI-4 20	3.64	.50	.03
VESI-4 21	.93	1.27	.45
VESI-4 22	.71	1.14	.44
VESI-4 23	2.79	1.05	.40
VESI-4 24	3.79	.43	.19
VESI-4 25	1.93	1.44	.62
VESI-4 26	3.64	.63	-.01
VESI-4 27	1.71	1.77	.45
VESI-4 28	2.36	1.78	-.08
VESI-4 29	3.43	.65	.01
VESI-4 30	2.36	1.28	.47
VESI-4 31	2.43	1.70	.41
VESI-4 32	3.07	1.44	.51
VESI-4 33	2.43	1.40	.48
VESI-4 34	1.57	1.60	.66
VESI-4 35	2.79	1.48	.57
VESI-4 36	2.14	1.66	.86
VESI-4 37	2.14	1.41	.89
VESI-4 38	1.93	1.64	.68

TABLE 23 (continued)

VESI-4 Pre-Questionnaire	Means	Standard Deviations	Correlated Item Total Correlations
VESI-4 39	1.93	1.44	.64
VESI-4 40	3.21	.89	.49
VESI-4 41	2.93	1.49	.59
VESI-4 42	1.86	1.61	.62
VESI-4 43	2.07	1.82	.41
VESI-4 44	1.79	1.63	.46
VESI-4 45	2.71	1.64	.09
VESI-4 46	2.71	1.20	.33
VESI-4 47	3.07	.73	.42
VESI-4 48	2.93	1.38	.15
VESI-4 49	3.86	.36	.12
VESI-4 50	3.71	.47	-.20
VESI-4 51	3.43	.65	.08
VESI-4 52	3.71	.47	-.32
VESI-4 53	3.64	.50	.05
VESI-4 54	3.86	.36	-.11
VESI-4 55	3.50	.65	.10
VESI-4 56	3.21	1.12	.05
VESI-4 57	3.50	1.02	-.03
VESI-4 58	3.57	.65	.25
VESI-4 59	3.86	.36	.27
VESI-4 60	3.64	.63	.30
VESI-4 61	3.21	1.31	.37
VESI-4 62	3.14	1.03	.26
VESI-4 63	3.86	.36	.16
VESI-4 64	3.71	.47	.01
VESI-4 65	3.57	.65	.23
VESI-4 66	3.43	.65	-.11
VESI-4 67	3.86	.53	-.22
VESI-4 68	3.29	1.14	.34
VESI-4 69	2.93	1.63	.20
VESI-4 70	3.07	1.27	-.20
VESI-4 71	3.29	1.14	.29
VESI-4 72	2.21	1.58	.18
VESI-4 73	2.21	1.48	.42
VESI-4 74	1.71	1.68	.43
VESI-4 75	3.29	1.14	.42
VESI-4 76	3.29	1.14	-.30
VESI-4 77	3.50	.76	.61

TABLE 24

Reliability Tables

VESI-4 Post-Questionnaire	Means	Standard Deviations	Correlated Item Total Correlations
VESI-4 201	3.21	.89	.72
VESI-4 202	1.79	1.58	.33
VESI-4 203	2.93	.83	.57
VESI-4 204	3.14	.77	.83
VESI-4 205	3.21	.97	.67
VESI-4 206	3.00	1.04	.70
VESI-4 207	3.00	1.11	.71
VESI-4 208	3.07	.92	.64
VESI-4 209	3.07	.92	.51
VESI-4 210	2.71	1.27	.60
VESI-4 211	3.00	.88	.62
VESI-4 212	2.71	1.20	.64
VESI-4 213	2.36	1.50	.60
VESI-4 214	3.00	1.04	.67
VESI-4 215	2.29	1.14	-.04
VESI-4 216	2.93	1.07	.65
VESI-4 217	2.36	1.22	.64
VESI-4 218	3.14	.95	.72
VESI-4 219	3.07	1.07	.46
VESI-4 220	3.00	1.04	.77
VESI-4 221	.64	1.28	.41
VESI-4 222	.36	1.08	.22
VESI-4 223	2.14	1.35	.41
VESI-4 224	3.14	.95	.75
VESI-4 225	2.79	1.63	-.22
VESI-4 226	3.14	.95	.76
VESI-4 227	1.79	1.48	.25
VESI-4 228	2.43	1.16	.34
VESI-4 229	3.29	.73	.36
VESI-4 230	2.14	1.29	.75
VESI-4 231	3.00	1.24	.80
VESI-4 232	3.14	1.29	.59
VESI-4 233	2.43	1.09	.68
VESI-4 234	1.50	1.65	.55
VESI-4 235	3.21	.80	.50
VESI-4 236	2.64	1.34	.66
VESI-4 237	2.21	1.37	.74
VESI-4 238	1.71	1.73	.68

TABLE 24 (continued)

VESI-4 Post-Questionnaire	Means	Standard Deviations	Correlated Item Total Correlations
VESI-4 239	2.21	1.53	.45
VESI-4 240	3.07	.92	.56
VESI-4 241	3.07	1.00	.26
VESI-4 242	1.79	1.72	.30
VESI-4 243	1.71	1.54	.20
VESI-4 244	2.86	1.56	.64
VESI-4 245	2.71	1.64	-.01
VESI-4 246	2.29	1.33	.80
VESI-4 247	2.93	1.21	.78
VESI-4 248	2.86	1.35	.76
VESI-4 249	3.57	.76	.62
VESI-4 250	3.21	.80	.52
VESI-4 251	3.29	.91	.60
VESI-4 252	3.29	.91	.71
VESI-4 253	2.79	1.37	.82
VESI-4 254	3.26	.93	.76
VESI-4 255	3.00	.96	.74
VESI-4 256	2.86	1.17	.86
VESI-4 257	2.71	1.54	.79
VESI-4 258	2.93	1.21	.91
VESI-4 259	3.43	.94	.58
VESI-4 260	3.07	1.14	.63
VESI-4 261	3.29	1.14	.24
VESI-4 262	2.79	1.31	.29
VESI-4 263	3.36	1.15	.31
VESI=4 264	3.14	1.17	.74
VESI-4 265	3.50	1.16	.21
VESI-4 266	3.21	.97	.56
VESI-4 267	3.36	1.34	.27
VESI-4 268	3.29	1.14	.25
VESI-4 269	2.36	1.91	.13
VESI-4 270	2.14	1.66	.03
VESI-4 271	3.50	.65	.56
VESI-4 272	2.14	1.88	.48
VESI-4 273	1.93	1.86	.28
VESI-4 274	1.64	1.69	.36
VESI-4 275	2.57	1.28	.75
VESI-4 276	3.14	1.17	-.01
VESI-4 277	3.14	.95	.54
VESI-4 278	2.57	1.74	.72

TABLE 24 (continued)

VESI-4 Post-Questionnaire	Means	Standard Deviations	Correlated Item Total Correlations
VESI-4 279	2.57	1.50	.69
VESI-4 280	3.00	1.18	.66
VESI-4 281	2.86	1.51	.56
VESI-4 282	3.14	1.17	.56
VESI-4 283	3.21	1.31	.57
VESI-4 284	3.07	1.27	.34
VESI-4 285	1.93	1.38	.49
VESI-4 286	2.86	1.46	.71
VESI-4 287	2.57	1.45	.76
VESI-4 288	2.93	1.33	.73
VESI-4 289	2.86	1.41	.72
VESI-4 290	3.00	1.24	.08
VESI-4 291	2.21	1.67	.73
VESI-4 292	3.00	1.11	.76
VESI-4 293	1.29	1.38	.52
VESI-4 294	1.57	1.34	.65
VESI-4 295	2.14	1.17	.60
VESI-4 296	1.93	1.38	.69
VESI-4 297	2.21	1.42	.50
VESI-4 298	2.29	1.27	.76
VESI-4 299	1.50	1.40	.69
VESI-4 300	1.43	1.28	.60
VESI-4 301	1.36	1.28	.64
VESI-4 302	2.43	1.55	.69
VESI-4 303	1.71	1.27	.67
VESI-4 304	2.07	1.44	.45
VESI-4 305	3.00	1.04	.53
VESI-4 306	2.50	1.34	.76

TABLE 25

Reliability Tables

VESI-3	Means	Standard Deviations	Correlated Item Total Correlations
VESI-3 401	3.14	.95	.59
VESI-3 402	2.36	1.08	.41
VESI-3 403	2.79	.80	.08
VESI-3 404	2.29	1.20	.14
VESI-3 405	2.93	.73	.74
VESI-3 406	2.71	.99	-.10
VESI-3 407	2.71	.99	-.10
VESI-3 408	2.71	.73	.10
VESI-3 409	2.71	1.20	.64
VESI-3 410	2.50	1.40	.08
VESI-3 411	2.29	1.54	.12
VESI-3 412	3.71	.61	.06
VESI-3 413	3.00	1.52	.29
VESI-3 414	1.50	1.45	-.04
VESI-3 415	2.86	.86	-.07
VESI-3 416	2.36	1.08	.43
VESI-3 417	3.36	1.22	.12
VESI-3 418	2.00	1.18	-.05
VESI-3 419	3.50	.65	-.12
VESI-3 420	2.21	1.05	.01
VESI-3 421	3.29	1.33	.36
VESI-3 422	3.71	.61	.23
VESI-3 423	2.71	1.44	.57
VESI-3 424	2.14	1.35	.59
VESI-3 425	3.14	.95	.27
VESI-3 426	3.29	.83	.34
VESI-3 427	3.00	1.11	-.26
VESI-3 428	3.00	1.11	-.26
VESI-3 429	1.57	1.60	.52
VESI-3 430	.86	1.10	.38

TABLE 25 (continued)

VESI-3	Means	Standard Deviations	Correlated Item Total Correlations
VESI-3 431	3.21	1.25	.15
VESI-3 432	2.79	1.05	.53
VESI-3 433	2.86	1.10	.32
VESI-3 434	2.21	1.63	-.46
VESI-3 435	2.29	1.27	-.22
VESI-3 436	3.07	1.21	-.05
VESI-3 437	1.50	1.29	-.06
VESI-3 438	1.79	1.25	.22
VESI-3 439	2.57	1.02	.51
VESI-3 440	2.64	1.34	-.13
VESI-3 441	2.71	1.33	.13
VESI-3 442	2.71	1.54	.29
VESI-3 443	1.79	1.48	.44
VESI-3 444	1.29	.83	.50
VESI-3 445	1.64	.93	-.13

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