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# Imagery and Posttraumatic Stress Disorder: An Overview

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*A review of theories of traumatic neurosis or posttraumatic stress disorder reveals a relative neglect of the role of posttraumatic imagery. The broad range of imagery has not been recognized, nor its role in the disorder adequately formulated. A two-dimensional framework for understanding posttraumatic stress disorder based on 1) repetitions of trauma-related images, affects, somatic states, and actions and 2) defensive functioning puts into perspective the centrality of traumatic imagery, implies a reorganization of* DSM-III *criteria, points to new directions for research, and clarifies diagnostic and clinical confusion.*

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Trauma has been an important psychiatric concept since turn-of-the-century formulations of infantile trauma as a necessary condition for the development of adult neurosis (1). Alongside its hypothesized formative role in early personality development has been an interest in trauma as it occurs in late childhood, adolescence, or adulthood in response to external stressors of unusual intensity. This paper focuses on this last type of trauma.

The study of adolescent or adult trauma is a broad field that includes investigations of personal loss (2), illness and accidents (1, 3), and victimization such as rape (4). Survivors of natural or man-made disasters such as Buffalo Creek (5), World Wars I and II (6), the Vietnam (7, 8) and Arab-Israeli (9) wars, nuclear war (10), and the Holocaust (11) have been studied. In addition, the psychological aftermath of trauma has been researched in simulated laboratory experiments (1, 12, 13). Recently, pathological response to universally or near universally stressful events has been designated "posttraumatic stress disorder" and included in *DSM-III*.

In this paper we contend that there has been a failure to appreciate the role of imagery in clinical theories of posttraumatic stress disorder, in empirical investigations of posttraumatic stress disorder, and in the diagnosis and treatment of stressed individuals. We will document this by surveying the role of imagery in theoretical formulations of traumatic neurosis or posttraumatic stress disorder, by reviewing selected empirical investigations of posttraumatic stress disorder, and by discussing the diagnostic and therapeutic problems reported by clinicians. We will present a two-dimensional framework for understanding posttraumatic stress disorder that will 1) clarify and organize theoretical differences and lead to a reconceptualization of *DSM-III* criteria, 2) point to a more fruitful and systematic research perspective, and 3) remedy diagnostic and clinical confusion.

Images are mental contents that possess sensory qualities. They are distinguished from mental activity that is purely verbal or abstract. While images can have qualities associated with any of the sensory modalities, visual imagery is believed to be most common (14).

## THE ROLE OF IMAGERY IN CLINICAL THEORIES OF POSTTRAUMATIC STRESS DISORDER

### *Freud*

Noting the traumatic nightmares of soldiers from World War I, Freud focused on the dream as the primary location for traumatic imagery. He believed that individuals are not "much occupied in their waking lives with memories of their accident" (15, p. 13). Although Freud described a narrow range of

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imagery, later psychoanalytic writers (16–18) pointed out that considerable waking imagery exists in addition to the imagery in nightmares. Despite the restricted view of imagery, Freud's model of the processes underlying traumatic neurosis is extremely useful in organizing the apparently diverse manifestations of the disorder. Trauma occurs when the ego is overwhelmed "as a consequence of an extensive breach being made in the protective shield against stimuli" (15, p. 31). The individual's usual adaptive capabilities are disrupted, and he or she reverts to an early and primitive form of defense, the repetition compulsion. This mechanism, used extensively in early childhood, consists of repeating a disturbing event over and over. By actively recreating the event rather than passively experiencing it as in the original situation, the individual can gradually master the experience. Freud went on to postulate two broad effects of trauma on the individual. The first, fixations to the trauma, are attempts to remember or repeat the trauma, and the second, defensive reactions, intend that the trauma will be neither remembered nor repeated (19).

*World War II*

Kardiner has written extensively about his work with soldiers in World Wars I and II. Like Freud, Kardiner and Spiegel (6) stated that traumatic imagery is to be found primarily in dreams. Nightmares are described as one of the principal features of the traumatic neurosis. However, Kardiner and Spiegel noted that there is little conscious imagery about the trauma because there is partial or total amnesia for the traumatic event.

Kardiner and Spiegel defined trauma as an adaptive failure, as a withdrawal of the organism from the environment. There are two stages of a traumatic neurosis. In the physioneurosis or acute phase, the organism constricts and inhibits those aspects of psychological and physical functioning which permit orientation to, contact with, and manipulation of the environment. The term physioneurosis calls attention to the biological component of the disorder and the fundamental alterations that can occur in the autonomic nervous system. The second restitutive phase of the neurosis emerges as a response to the individual's impoverished ability to adapt. The personality reorganizes in an attempt to compensate for its weakness. The resultant symptom picture may correspond to any of the known mental disorders. Kardiner and Spiegel warned that if the distinction between the acute and chronic phases is not kept in mind, the traumatic neurosis may be overlooked.

Kardiner and Spiegel postulated that the breakdown in adaptive functioning is primary. Amnesia for traumatic material and recurrent nightmares are symptoms of this breakdown, not its cause. The more widely held view (for example, see Horowitz [1]) is that amnesia and other cognitive disruptions are attempts to defend against the excessive affect accompanying traumatic imagery, and thus impairment is a secondary rather than primary development.

Grinker and Spiegel's book, *Men Under Stress* (20), is, along with Kardiner and Spiegel's work, the most comprehensive study of the men who fought in World War II. They did not focus on the role of imagery but mentioned in a long list of symptoms that the preoccupation with combat experience was more frequent than nightmares in cases of psychiatric casualties; however, they reported nightmares more often in their clinical case reports. In addition, Grinker and Spiegel did not believe that recurrent nightmares are attempts at mastery of the traumatic anxiety, as Freud proposed. They stated that combat dreams serve the function of punishment for current conflicts unrelated to combat (20). However, like Freud, they stated that the defining feature of the individual's reaction to trauma is the overwhelming of the ego and its resultant inability to function. The ego dissolution found in Air Force personnel was noted to be much less severe than that found in ground troops. The extensive amnesia, stuporous states, and profound somatic regressions that Kardiner and Spiegel reported in ground combat soldiers are rarely seen. This is believed to be a reflection of the greater duration and intensity of stress experienced by ground troops.

*Biological Approach*

Kolb and Multalipassi (21), building on the work of Kardiner and Spiegel (6) and Dobbs and Wilson (22), identified a subgroup of individuals with chronic or delayed posttraumatic stress disorder who are thought to exhibit a conditioned emotional response, "a continuing tendency for pathophysiological arousal of self-preservative emotion in the face of stimuli signaling threat affect" (21, p. 987). This approach, primarily advocated by Kolb, postulates that in the traumatized individual the emotional responses of fear have become conditioned to the sights and sounds of the traumatic event. The conditioned emotional response continues to be elicited by stimuli reminiscent of the trauma, i.e., conditioned stimuli, and by the presence of affects similar to those in the conditioned emotional response, which then precipitate the conditioned response itself.

An important consequence of this point of view is that Kolb and Multalipassi believe psychological intervention alone will not be effective with this subgroup of patients. They assert that the conditioned emotional response must be approached on a biological level as well. They did not address imagery in this subgroup of patients.

*Lifton and Symbolization*

On the basis of studies of survivors of Hiroshima (10), the Buffalo Creek disaster (23), and veterans of the Vietnam war (7, 24), Lifton has articulated a model of response to trauma based on the importance

of the ongoing symbolization of life. Trauma disrupts these primary symbols. Lifton described the following five manifestations of this disruption (23). First the individual experiences the "death imprint," vivid memories and images of death and destruction that are difficult to dispel. These images are associated with extreme fear or, as Lifton termed it, death anxiety. The individual's sense of invulnerability is destroyed, he anticipates further trauma, and he begins to experience the world as unpredictable and lethal. The second manifestation of disruption in symbols is death guilt, or the guilt over survival. The individual reviews scenes in which he might have saved others or dreams repetitively of "an image of ultimate horror" (23, p. 4) that symbolizes the personal meaning of the trauma. The third manifestation of disruption is psychic numbing, a loss of the ability to feel and be involved with the world, which Lifton believes to be the most prevalent and essential aspect of the response to severe trauma. Initially it is a defense against the immediate traumatic event but continues as a defense against the ensuing death anxiety and death guilt. Lifton believes numbing is a strong identification with those who have died. Confusion and forgetting are often evidence of numbing. The fourth manifestation of symbol disruption is impaired human relationships, which are particularly characterized by the desire for support or help accompanied by skepticism as well as by irritability and rage. The fifth category is the meaning or symbolization that the individual gives to his experience of disaster, which is what enables him to work through the death imprint, death guilt, psychic numbing, and impairment of human relationships.

Lifton's emphasis on symbolization made it natural for him to focus on imagery. Images are the mental contents that express the death imprint and often the death guilt. For him the most central aspect of the survivor syndrome, psychic numbing, is seen as a defense against the experience of death imprint and death guilt. Thus Lifton emphasized the defenses that block traumatic imagery and disrupt the individual's ongoing symbolization of life.

*Holocaust Survivors*

There is a large body of literature about survivors of concentration camps and Nazi persecution (11, 25). Niederland, in a description of the "survivor syndrome," mentioned imagery, but since he was not creating an explanatory model, he did not formulate its role in a more formal sense (25). Niederland listed the following eight aspects of the survivor syndrome: depression, anhedonia, anxiety in the form of undisguised phobias of repetition of the trauma, hypermnesia consisting of "overly sharp, distinct, and virtually indelible memories" (26, p. 416), alterations in identity and the sense of time and place, psychosomatic conditions, survivor guilt, and psychic vulnerability. He stated that hypermnesia is one of the most painful experiences for the survivor. Although the individual may rarely speak of these experiences, he is "constantly haunted" by them (26, p. 414). The disturbances of identity and of time and place, which can attain psychotic proportions, are related to hypermnesia rather than being manifestations of a psychotic process in the usual way it is understood.

Krystal has proposed a unique view of the reaction to trauma based on a developmental perspective (27). He distinguished infantile and adult trauma by focusing on the relationship of extreme affects to the genesis of trauma. In infancy and childhood, trauma results when the child is flooded with intolerable affect after a disturbing experience. In the adult there is not a continual increase in levels of affect to the point of their becoming consciously experienced as intolerable. Rather, the adult surrenders helplessly to danger, and at this point painful affect changes to what Krystal called "cataleptic passivity." The experience of affect and physical sensation is blocked, and a process of progressive constriction occurs, ultimately involving "initiative and all life-preserving cognition" (27, p. 102). The most advanced stage of this process leads to psychogenic death. Thus adult trauma leads to two areas of defect in functioning. The first is the dedifferentiation, resomatization, and deverbalization of affective experience, which leads to, among other outcomes, alexithymia, the inability to articulate emotional experience. The second defect in functioning is a result of the cognitive constriction of higher mental functions. This constriction varies in severity but may progress to the point at which all adaptive capacities are destroyed. Krystal was attempting to explain the profoundly debilitated state of many Holocaust survivors.

*Horowitz*

Horowitz's work has most clearly focused on the role of imagery in stress disorders. Over the last two decades he has used methods ranging from detailed clinical case studies, experimental simulations of trauma, and interview studies of traumatized populations to studies of psychotherapy with stressed individuals (1, 14, 28).

Horowitz has called attention to and distinguished variations in the formal properties of imagery, emphasizing dimensions such as vividness and controllability, i.e., the extent to which the individual feels able to control the image and contact with reality (14, 29). He has carefully described the broad spectrum of waking imagery, from dim impressions to vivid, detailed memories that again and again abruptly enter consciousness and are difficult to dispel (intrusive-repetitive images) to pseudohallucinations, hallucinations, or hypnagogic phenomena (14). This has been a particularly important contribution because of the historical tendency to posit a narrow band of traumatic imagery occurring primarily in nightmares.

Horowitz has conceptualized trauma as a stress on the individual's information processing system (1). The

traumatic event is new information that the individual must integrate into the preexisting view of the self, others, and the world. Horowitz has emphasized the impact of the trauma on cognitive schemata and the role of controls (defensive functioning) regulating the processing of information. In this context, Horowitz has described the following sequence as reaction to trauma: outcry, denial, intrusion, working through, and completion. He has focused on two mental states: denial and intrusion. Denial is characterized by inattention, amnesia, constriction of the thought process, and emotional numbing. Intrusion is characterized by intrusive-repetitive thoughts, sleep disturbances including nightmares, hypervigilance, and pangs of strong emotion. As these states alternate, they gradually decrease in severity and frequency until a new equilibrium is achieved and a world view incorporating the trauma is established. Imagery has a clear and central place in this theory. In the intrusion phases repetitions of traumatic imagery and affect occur. In the denial phases a variety of mechanisms are employed to prevent or avoid these repetitions.

*Summary and Review of Clinical Theories*

In reviewing clinical theories we have emphasized the difficulties authors have in maintaining a focus on imagery and in clearly conceptualizing its role in posttraumatic stress disorder. Several kinds of difficulties are evident.

1. Imagery is mentioned anecdotally but not given a systematic or prominent niche in the theoretical model. This is true of the theories proposed by Kardiner and Spiegel (6), Grinker and Spiegel (20), Kolb and Multalipassi (21), and Krystal (27). A number of these authors have given detailed clinical descriptions of traumatic imagery or noted that traumatic imagery is a manifestation of traumatic neurosis, but these insights have not been accompanied by a recognition of their importance and are therefore weakened.

2. For those who discuss imagery, an overly restricted continuum of imagery is presented. This is true for Freud, Kardiner and Spiegel, and Grinker and Spiegel. For some authors this is explicitly related to factors integral to the syndrome that are responsible for limiting the range of imagery, e.g., the role of amnesia in preventing conscious imagery in Kardiner and Spiegel's theory (6). For others, there is often not an explicit description of the many ways in which imagery may be manifested. This can lead to generalizing from selected clinical examples and incorrectly concluding that the type of imagery described is the most usual or the only possible type of imagery.

3. Contradictory views about imagery coexist in some theories. An example is Grinker and Spiegel's designation of nightmares as part of the traumatic neurosis alongside their belief that recurrent nightmares are not primarily about the trauma but about other conflicts (20).

What can be concluded from a comparison of the theoretical models themselves? In order to consider this, we will present a simplified skeletal framework of each model (figure 1). In Freud's theory memories lead to painful affects, which in turn lead to defenses. The repetition compulsion is the mechanism propelling the continued return of the traumatic material. In Horowitz's schema new information leads to painful affect, which leads to controls, i.e., defenses. The driving principle for this formulation is Horowitz's assumption of a completion tendency for cognitive processing. Horowitz, like Freud, has viewed the individual oscillating between two states: one of repetition of trauma-related images, thoughts, and affects and the second of defensive efforts at controlling repetitions. Lifton's model involves the linking of memories, images, and affect associated with death, which then trigger defensive functioning. Kolb and Multalipassi's model differs from the rest in that it conceptualizes a biological diathesis that leads to a conditioning of the emotional response followed by the eruption of symptoms. Yet their model is still basically the same as the first part of the Freud-Horowitz one. Conditioned stimuli, rather than the repetition compulsion or cognitive processing, lead to the experience of painful affect. The model does not go on to discuss the second dimension, the defensive functioning, mentioned by others.

These theories, referred to in figure 1 as type A, all share a fundamentally similar organization. Trauma-linked imagery, thoughts, or perceptions lead to painful affect, which leads to a defensive or coping reaction. Each theory has an explanation for the activating or propelling mechanism in the syndrome.

The models that do not fit this paradigm are those of Kardiner and Spiegel and of Krystal. Interestingly, these two models are similar. These researchers have developed models referred to in figure 1 as type B on the basis of a massive adaptive failure that is directly initiated by the traumatic event. This state then leads to certain consequences, in Kardiner and Spiegel's theory to a secondary restitutive effort and in Krystal's to the possibility of progressive constriction. Kardiner and Spiegel believed traumatic imagery and amnesia to be consequences of the primary defensive deficit rather than aspects of oscillation between repetitions and defenses, as in the first model. We have emphasized the differences in the models for the purposes of discussion. Actually, Freud also noted a disorganization of functioning at the time of the trauma. However, the emphasis on the centrality and prominence of the adaptive failure in Kardiner and Spiegel's and Krystal's theories is different than in the type A model. The disadvantage of the model of primary adaptive failure is that it fails to adequately account for the symptoms so peculiar to and characteristic of posttraumatic stress disorder—the repetitive memories, images, and affects and their relation to defenses and constriction of functioning. Thus, the type A model has more explanatory utility. However, the second model is based on work with individuals exposed to more severe stress, and it may very well be a more accurate description of

**FIGURE 1. Models of Stress Disorder**

| TYPE A | EXPLANATORY SCHEMA | ACTIVATING PRINCIPLE |
|---|---|---|
| Freud | Memories ➤ Painful affect ➤ Defense | Repetition compulsion |
| Horowitz | Information ➤ Painful affect ➤ Controls | Completion tendency of cognitive processing |
| Lifton | Death imprint ➤ Death guilt ➤ Psychic numbing | Disruption of symbols |
| Kolb and Multalipassi | Conditioned stimuli ➤ Conditioned emotional response | Conditioning |
| **TYPE B** | | |
| Kardiner and Spiegel | Withdrawal and constriction ➤ Restitutive effort | Primary adaptive failure |
| Krystal | Cataleptic passivity ➤ Progressive constriction | Primary adaptive failure |

response to extreme trauma in which defensive functioning is so extensive that the dimension of repetition phenomena is obscured or in fact obliterated.

From figure 1 we can abstract a simplified descriptive framework of stress disorder containing two dimensions of symptoms that run throughout previous work. The first dimension is the repetition of the trauma in images, affective and somatic states, and action (figure 2). The second is defensive attempts to deny the trauma, including psychogenic amnesia, emotional numbing, and suppressive and avoidant behaviors. The relationship of the two dimensions has yet to be fully explicated. There are two possibilities, which are both undoubtedly operative: 1) the defensive maneuvers are in part a direct continuation of the individual's reaction at the traumatic moment, and 2) the defensive maneuvers come into operation in response to the affect generated by the repetition phenomena.

As the review of the literature indicates, a focus on these two dimensions is not a new proposal for understanding posttraumatic stress disorder. Horowitz has been the most eloquent recent spokesman for this approach, although he has proposed a more specific model than the one we advocate. We believe this two-dimensional framework has the following advantages.

1. It gives clear emphasis to imagery as a form of repetition.

2. It organizes the diverse symptoms and behavior of traumatized people; e.g., an absence of imagery can be conceptualized as the result of defensive activity rather than as evidence of its nonexistence or irrelevance for stress disorder.

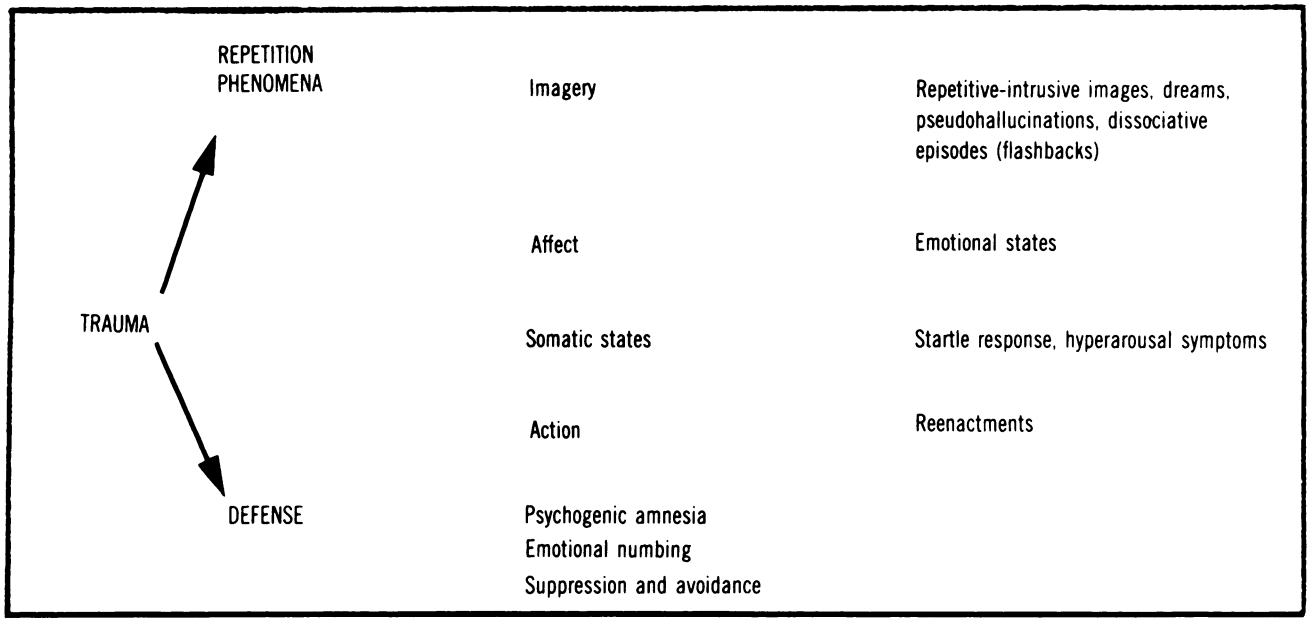
3. It leaves open a number of questions regarding the relation of the dimensions to each other, e.g., the extent to which the defensive behavior is a direct continuation of behavior from the traumatic situation, the extent to which it is a response to repetition phenomena, the extent to which the two dimensions oscillate, and the extent to which one dimension more clearly characterizes an individual's response to the trauma. We believe these questions have not been settled and should not be prematurely closed, which is why we present a framework rather than a more developed model.

4. Most importantly, we believe that this view of stress disorders has not influenced research on stressed populations nor has it been sufficiently used by clinicians in the treatment of stressed populations.

## IMPLICATIONS FOR NOSOLOGY

This two-dimensional framework leads one to reconceptualize and reorganize the *DSM-III* criteria. There are four diagnostic criteria for posttraumatic stress disorder in *DSM-III*. The first is the presence of a stressor capable of eliciting symptoms of distress almost universally. The second consists of "reexperiencing of the trauma," which includes recurrent and intrusive memories, repetitive dreams, and acting or feeling as if the event is recurring. The third criterion is the "numbing of responsiveness to or reduced involvement with the external world," which includes loss of interest in activities, feelings of estrangement from others, and "constricted affect." The fourth consists of at least two of the following six symptoms: startle response, sleep disturbance, survivor guilt, memory impairment, avoidance of reminders of the stressor,

**FIGURE 2. Two-Dimensional Framework of Posttraumatic Stress Disorder**




and increase in symptoms on exposure to reminders of the stressor.

Criterion 2, reexperiencing of the trauma, and criterion 3, numbing of responsiveness, are consistent with the two dimensions of stress disorder that we have outlined. A close examination of the miscellaneous collection of symptoms in criterion 4 reveals that it can be easily divided into symptoms belonging to criteria 2 and 3. The startle response, sleep disturbance, survivor guilt, and intensification of symptoms after exposure to reminders of the stressor are all forms of or accompaniments to imagic and affective reexperiencing phenomena. Cognitive impairment and avoidance of reminders are, like numbing, aspects of the defensive response to reexperiencing. This reorganization recognizes the centrality of the traumatic image, affective repetition, and the range of defensive efforts.

We believe that positing these two dimensions of stress disorder has not only conceptual utility but also applications for research and clinical work.

## RESEARCH ON IMAGERY AND STRESS DISORDERS

In the research literature on stressed individuals, as in the theoretical work in this area, there has been a relative neglect of imagery. There have been few attempts to systematically collect information about imagery. Research has primarily focused on measuring psychiatric symptoms such as anxiety or depression and broad indicators of life adjustment in educational, vocational, or social areas. For example, in the literature on rape, the symptoms most emphasized include depression, anxiety, phobias, fears, and somatic symptoms (4). Recurrent thoughts and nightmares about the rape are described in illustrative passages only. The frequency and types of intrusive imagery are not reported even when posttraumatic stress disorder is used as a conceptual framework (30). Similarly, in the five largest studies of Vietnam veterans there are only a few questions about imagery (8, 31–35).

There are, however, two examples of research that have both focused on imagery and used the two-dimensional model we have proposed. The first can be found in the work of Horowitz, who has most comprehensively studied the relationship of imagery to stress disorders. He has used several approaches. His first was to investigate the effects of experimentally induced stress (using films) on imagery. Findings indicate that intrusive, repetitive images of the stressor follow stressful experiences. This work has been done primarily in normal populations, although psychiatric patients have also been used (36, 37). His second approach has been to examine symptoms and behaviors characteristic of individuals seeking treatment for a variety of stresses such as illness, accidents, or the loss of a loved one. This work led to the measurement of the phases of intrusion and avoidance by the Impact of Event Scale, a 15-item self-report form (38, 39).

In a cross-validational study of the Impact of Event Scale, Zilberg et al. (39) demonstrated that those seeking treatment as a result of their loss endorse items more frequently and that patterns of response are consistent with clinical theory. The scale is an important methodological advance in this area. Horowitz's third approach has been a clinical-descriptive examination of alterations in the mental states of intrusion and avoidance during brief psychotherapy (28).

A second example of research focused on imagery and a two-dimensional approach to stress disorder is

found in the work of Laufer et al. (40). In a subsequent analysis of the Legacies of Vietnam data set (40), the authors created scales to measure two dimensions of stress disorder from a heterogeneous stress scale. They demonstrated that different war stressors such as exposure to combat and the witnessing of and participation in abusive violence contribute to distinct patterns of stress symptoms over time. Intrusive imagery and affective and somatic reexperiencing are associated with exposure to combat, while participation in atrocities is associated with severe forms of numbing. This finding is consistent with clinical expectations that those who have committed acts about which they are particularly guilty will defend against their awareness at great cost. Laufer et al. (40) noted that using a *DSM-III* scoring format to determine levels of diagnosable stress disorder obscures the relationship between war stressors and the two distinct dimensions of stress symptoms.

## DIAGNOSIS AND TREATMENT

The two-dimensional model will significantly aid clinicians in the diagnosis and treatment of posttraumatic stress disorder. Despite the increasing recognition and specification of reaction to severe stress in the growing literature on the subject, a spate of articles have commented that posttraumatic stress disorder is underdiagnosed and undertreated (3, 23, 40–45). A number of factors contribute to the difficulty clinicians experience in recognizing the disorder.

1. Patients themselves are silent about traumatic events, as virtually all writers about this topic attest (6, 19, 46).

2. Posttraumatic stress disorder may be masked by a secondary disorder that is being used to cope with the symptoms of the primary stress disorder, as described by Kardiner and Spiegel (6). This has been noted in relation to alcohol and substance abuse (47). Discussing the fact that the relationship of alcohol abuse to posttraumatic stress disorder is often missed, Lacoursiere et al. (44) mentioned that they could find no reference to the relationship of traumatic neurosis to alcoholism in the literature since World War II.

3. Symptoms of posttraumatic stress disorder overlap with or mimic other disorders (48). For example, Walker (45) pointed out that the overlap between symptoms of antisocial personality and posttraumatic stress disorder often leads to the incorrect use of the former diagnosis.

4. The nature of traumatic imagery is frequently misunderstood. Van Putten and Emory (47) reported that hallucinations or dissociative episodes about trauma have been mistakenly used as the basis for diagnoses of schizophrenia, psychomotor epilepsy, and LSD abuse.

There are two major reasons why the accurate detection of posttraumatic stress disorder is important. First, misdiagnosis may lead to inappropriate treatment. Prolonged medication with phenothiazines (47) or treatment of secondary syndromes while missing the precipitating condition (43) are examples of this. Second and most important, if the diagnosis of posttraumatic stress disorder is missed, there is often a continual deterioration and worsening of the clinical picture.

Many authors have strongly emphasized their observation that without treatment, the pathological response to trauma can become increasingly debilitating. This has been observed in veterans of World War II (6, 42) and the Vietnam war (41) and in survivors of accidents (3) and natural disasters (23).

How will the model proposed here help clinicians recognize posttraumatic stress disorder? If history taking reveals a traumatic stressor, the clinician can use the model of traumatic repetition and denial of the event as central points of orientation. He can ask in detail about these two aspects of response to trauma, which can counteract the patient's silence about traumatic events and posttraumatic imagery and allow recognition of posttraumatic stress disorder despite secondary disorders or the varied symptomatic accompaniments of the disorder. Misinterpretations of trauma-linked hallucinations or dissociative episodes can also be prevented.

There are a number of factors to consider with regard to the patient's ability to discuss the trauma. Historically, it was believed that the patient had little imagery available to discuss due to extensive amnesias. Dream interpretation, hypnosis, and drug-induced remembering were all used to gain access to the hidden material. Despite the current awareness of greater potential for discussion, the patient may have difficulty reporting his responses to the trauma. This may be due to relatively longstanding amnesias, shorter-term defenses against remembering, a suspicion of the motives or genuineness of the clinician's willingness to listen (49), or the patient's inability to convey his internal experience.

It is important to recognize that it is also possible to take an overly direct approach. If the individual's defenses are not strong enough and remembering the trauma causes excessive anxiety, the individual may begin to experience the clinician as a tormentor similar to his memories of the trauma. He will then be likely to flee treatment, a difficulty often reported in outreach efforts to stressed individuals (50, 51).

## CONCLUSIONS

This paper has pointed out the tendency to minimize the role of imagery in clinical theories of posttraumatic stress disorder, research investigations of this disorder, and clinical and diagnostic work with stressed individuals. The fate of imagery in these three areas can be seen as analogous to its role in the disorder. The literature includes many varied, detailed descriptions of particular images that convey the intense, compelling quality of traumatic repetitions, but the focus on

these images quickly fades, becoming obscured and only partially visible. This difficulty in keeping imagery in focus has led to a paucity of clinical models of posttraumatic stress disorder incorporating its role; to the lack of research data on its range, content, and patterning over time; and to clinical and diagnostic confusion. A model of posttraumatic stress disorder that includes the two basic dimensions of repetition of traumatic imagery and affective and somatic states and the defenses against them would lend coherence and focus to both clinical and research efforts.

## REFERENCES


1. Horowitz MJ: Stress Response Syndromes. New York, Jason Aronson, 1976
2. Lindemann E: Symptomatology and management of acute grief. Am J Psychiatry 101:141–148, 1944
3. Leopold RL, Dillon H: Psycho-anatomy of a disaster: a long term study of post-traumatic neuroses in survivors of a marine explosion. Am J Psychiatry 119:913–921, 1963
4. Katz M, Mazur M: Understanding the Rape Victim: A Synthesis of Research Findings. New York, John Wiley & Sons, 1979
5. Erikson KT: Loss of communality at Buffalo Creek. Am J Psychiatry 133:302–305, 1976
6. Kardiner A, Spiegel H: War Stress and Neurotic Illness. New York, Paul B Hoeber, 1947
7. Lifton RJ: Home From the War. New York, Simon and Schuster, 1973
8. Egendorf A, Kadushin C, Laufer RS, et al: Legacies of Vietnam: Comparative Adjustment of Veterans and Their Peers. Washington, DC, US Government Printing Office, 1981
9. Lavie P, Hefez A, Halperin G, et al: Long-term effects of traumatic war-related events on sleep. Am J Psychiatry 136:175–178, 1979
10. Lifton RJ: Death in Life. New York, Random House, 1968
11. Krystal H (ed): Massive Psychic Trauma. New York, International Universities Press, 1968
12. Lazarus RS, Opton EM Jr: The study of psychological stress: a summary of theoretical formulations and experimental findings, in Anxiety and Behavior. Edited by Speilberger C. New York, Academic Press, 1966
13. Klos DS, Singer JL: Determinants of the adolescent's ongoing thought following simulated parental confrontations. J Pers Soc Psychol 41:975–987, 1981
14. Horowitz MJ: Image Formation and Cognition. New York, Appleton-Century-Crofts, 1970
15. Freud S: Beyond the pleasure principle (1920), in Complete Psychological Works, standard ed, vol 18. London, Hogarth Press, 1953
16. Fenichel O: The Psychoanalytic Theory of Neurosis. New York, WW Norton, 1945
17. Schur M: The Id and the Regulatory Process of the Ego. New York, International Universities Press, 1966
18. Furst SS (ed): Psychic Trauma. New York, Basic Books, 1967
19. Freud S: Moses and monotheism (1939), in Complete Psychological Works, standard ed, vol 23. London, Hogarth Press, 1953
20. Grinker R, Spiegel J: Men Under Stress. Philadelphia, Blakiston, 1945
21. Kolb LC, Multalipassi LR: The conditioned emotional response: a sub-class of the chronic and delayed post-traumatic stress disorder. Psychiatr Annals 12:979–987, 1982
22. Dobbs D, Wilson HP: Observations on the persistence of war neurosis. Dis Nerv Syst 21:40–46, 1960
23. Lifton RJ, Olson E: The human meaning of total disaster: the Buffalo Creek experience. Psychiatry 39:1–18, 1976
24. Lifton RJ: The Broken Connection. New York, Simon and Schuster, 1979
25. Krystal H, Niederland WG: Psychic Traumatization. Boston, Little, Brown, 1971
26. Niederland WG: The survivor syndrome: further observations and dimensions. J Am Psychoanal Assoc 30:413–425, 1982
27. Krystal H: Trauma and affects. Psychoanal Study Child 33:81–117, 1978
28. Horowitz MJ: States of Mind. New York, Plenum, 1979
29. Horowitz MJ: Stress films, emotion and cognitive response. Arch Gen Psychiatry 33:1339–1344, 1976
30. Nadelson CC, Notman MT, Zackson H, et al: A follow-up study of rape victims. Am J Psychiatry 139:1266–1270, 1982
31. Wilson J: Identity, Ideology, and Crisis: The Vietnam Veteran in Transition, Parts I and II. Washington, DC, Disabled American Veterans, 1977
32. Helzer JE, Robins LE, Davis DH: Depressive disorders in Vietnam returnees. J Nerv Ment Dis 163:177–185, 1976
33. Helzer JE, Robins LN, Wish E, et al: Depression in Viet Nam veterans and civilian controls. Am J Psychiatry 136:526–529, 1979
34. Harris L: Myths and Realities: A Study of Attitudes Toward Vietnam Era Veterans. Washington, DC, Veterans Administration, 1980
35. Figley CR, Southerley WT: Psychosocial adjustment of recently returned veterans, in Strangers at Home: Vietnam Veterans Since the War. Edited by Figley CR, Leventman S. New York, Praeger, 1980
36. Horowitz MJ, Becker SS, Moskowitz M, et al: Intrusive thinking in psychiatric patients after stress. Psychol Rep 31:235–238, 1972
37. Horowitz MJ, Becker SS, Malone P: Stress: different effect on patients and non-patients. J Abnorm Psychol 82:547–551, 1973
38. Horowitz MJ, Wilner N, Alvarez W: Impact of Event Scale: a measure of subjective stress. Psychosom Med 41:209–218, 1979
39. Zilberg NJ, Weiss DS, Horowitz MJ: Impact of Event Scale: a cross-validational study and some empirical evidence supporting a conceptual model of stress response syndromes. J Consult Clin Psychol 50:407–414, 1982
40. Laufer RS, Brett EA, Gallops M: Post-traumatic stress disorder reconsidered: PTSD among Vietnam veterans, in Post-traumatic Stress Disorder: Psychological and Biological Sequelae. Edited by van der Kolk BA. Washington, DC, American Psychiatric Press, 1984
41. Horowitz MJ, Solomon GF: Delayed stress response syndromes in Vietnam veterans. J Social Issues 31:67–80, 1975
42. Archibald HC, Long DM, Miller C, et al: Gross stress reactions in combat—a 15-year follow-up. Am J Psychiatry 119:317–322, 1962
43. Archibald HC, Tuddenham RD: Persistent stress reaction after combat: a twenty year follow-up. Arch Gen Psychiatry 12:475–481, 1965
44. Lacoursiere RB, Godfrey KE, Ruby LM: Traumatic neurosis in the etiology of alcoholism: Viet Nam combat and other trauma. Am J Psychiatry 137:966–968, 1980
45. Walker JI: Viet Nam combat veterans with legal difficulties: a psychiatric problem? Am J Psychiatry 138:1384–1385, 1981
46. Shatan CF: The grief of soldiers—Vietnam veterans self-help movement. Am J. Orthopsychiatry 43:640–653, 1973
47. Van Putten T, Emory WH: Traumatic neuroses in Vietnam returnees. Arch Gen Psychiatry 29:695–698, 1973
48. Penk WE, Robinowitz WR, Patterson ET, et al: Adjustment differences among male substance abusers varying in degree of combat experience in Vietnam. J Consult Clin Psychol 49:426–437, 1981
49. Kijak M, Funtowicz S: The syndromes of the survivor of extreme situations: definitions, difficulties, hypotheses. Int Rev Psycho-Analysis 9:25–33, 1982
50. Lindy JD, Grace MC, Green BL: Survivors: outreach to a reluctant population. Am J Orthopsychiatry 51:468–478, 1981
51. Binder RL: Difficulties in follow-up of rape victims. Am J Psychother 35:534–541, 1981