

Reactivation of Combat-Related Posttraumatic Stress Disorder

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The authors conducted an exploratory study of the nature and course of reactivation of combat-related posttraumatic stress disorder. Experienced psychiatrists, they each independently assessed 35 men with recurrent combat-related posttraumatic stress disorder. Two major types of reactivated posttraumatic stress disorder, each representing a different degree of pathology, were delineated: uncomplicated reactivation and heightened vulnerability. The second category was further subdivided into specific sensitivity, moderate generalized sensitivity, and severe generalized sensitivity. The authors conclude that reactivation of war-related trauma is a complex phenomenon that may take different forms.

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Combat stress has long been documented as a cause of psychiatric disorder (1-3). Of the variety of enduring combat-related stress syndromes (4), the most prevalent is posttraumatic stress disorder. This relatively recently named syndrome (*DSM-III*) may appear in an acute form, differentiated into its characteristic clinical symptoms within 6 months of the traumatic event, or it may take the form of chronic or delayed posttraumatic stress disorder. Chronic posttraumatic stress disorder is diagnosed when the symptoms persist for longer than 6 months. Delayed posttraumatic stress disorder is diagnosed when the symptoms appear for the first time after a period of at least 6 months and without apparent antecedent warning symptoms. In this study we focus on a unique variety of posttraumatic stress disorder: reactivated combat-related posttraumatic stress disorder. Here, a previous combat stress reaction, a specific form of acute posttraumatic stress disorder, is again precipitated after exposure to similar stress.

Reactivation of stress disorder may occur in a variety of stressful life events. Silver and Wortman (5), in an extensive review, contended that traumatic experiences often render the afflicted individual vulnerable in the face of future adversity. Even in situations where the individual appears to have overcome the trauma, heightened vulnerability may ensue.

Lindemann (6) noted that a former unresolved grief reaction may be reactivated when the bereaved is reminded of his or her loss. The precipitating factor for the delayed reaction may be a deliberate recall of circumstances surrounding the death, or it may be an incident in the patient's life. Similar observations were made by Weiner et al. (7) regarding recurrent anniversary grief reactions generated by stimuli reminiscent of the original loss. Women who have been raped also evidence similar reactivation of their response to the original trauma (8).

Although the phenomenon of reactivated response to trauma has been documented in both the military and the civilian realms, empirical research pertaining to recurrent combat-related posttraumatic stress disorder is rather limited. Christenson et al. (9) suggested that losses associated with the patient's age, such as parental loss, children leaving home, impending retirement, and increasing medical disability, serve as triggers activating and unmasking latent war-related posttraumatic stress disorders. Interestingly, these authors found that latent posttraumatic stress disorder symptoms such as nightmares about World War II had been dormant in their patients for many years. This observation is consistent with an earlier 20-year follow-up study of World War II veterans (10) in which war-related posttraumatic stress disorder symptoms became evident as the veterans got older.

An earlier study by our group (4) conducted during the 1982 Lebanon War found a very limited number of reactivated combat stress reactions. As time passed, however, many more cases came to our attention. To our knowledge, reactivation of combat-related posttraumatic stress disorder following exposure to a new combat experience as a clinical category has never been singled out for investigation. The unfortunate reality of Israel's military situation, with frequent wars and repeated exposure of Israeli men to combat, presents a unique opportunity for the study of reactivation.

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vated combat-related posttraumatic stress disorder. Even when spared the rigors of combat, Israeli men are regularly exposed to military stimuli that serve as continuous reminders of their combat experience. After 3 years of mandatory active military service, all Israeli men up to the age of 55 serve in the reserves for about 30 days a year.

In the present study, 35 case histories of veterans with recurrent combat-related posttraumatic stress disorder were reviewed to explore the nature and course of this reactivation.

METHOD

We each carefully reviewed the medical files of Israeli soldiers diagnosed as suffering from combat-related posttraumatic stress disorder during or immediately after the 1982 Lebanon War. Experienced psychiatrists, we recognized 35 of these soldiers as suffering from recurrent combat-related posttraumatic stress disorder. The files were compiled on the basis of thorough psychiatric evaluations conducted for diagnostic purposes preliminary to the soldiers' receiving psychiatric treatment at the central mental health clinic of the Israel Defense Forces. The files included clinical evaluations and verbal accounts of therapy sessions. We individually reviewed each of the medical files of the 35 men in order to establish the psychiatric diagnosis of reactivated or exacerbated posttraumatic stress disorder.

First, using *DSM-III* criteria, we confirmed the examining clinician's diagnosis of posttraumatic stress disorder. Then, we determined whether the 35 cases represented first-time occurrences or a reactivation or exacerbation of symptoms. The eligibility criteria were either the reactivation of a completely dormant or resolved episode of combat stress reaction from the 1973 Yom Kippur War or the exacerbation of residual symptoms of combat stress reaction that were present between the 1973 Yom Kippur War and the 1982 Lebanon War.

In most cases we agreed in our assessments. In the few cases where we had initially reached somewhat different conclusions, we reached agreement after discussion. Our diagnoses of posttraumatic stress disorder were checked against computerized military records. These records contain the combat history and a somatic and psychiatric medical history of every soldier. The availability of this information minimizes the possibility of mistaken or factitious reports of earlier combat stress reactions.

All 35 patients were soldiers on reserve duty. Their ages ranged from 28 to 39 years (median = 31 years). Thirty-three (94%) of the soldiers were married, one was divorced, and one was single. All of the soldiers demonstrated a high motivation to serve in the army despite having had a combat stress reaction, which would have permitted them to receive a military discharge had they desired it.

RESULTS

Assessment of charts revealed a spectrum of symptoms ranging in intensity of severity from very mild to extreme behavioral and functional disability. Two major groups of combat-related reactivated posttraumatic stress disorder were delineated, representing degrees or stages of the clinical picture of the disorder. The second major group was subdivided into three subgroups. The resulting four groups represent different points on the spectrum of pathology to recovery that is part of the natural history of combat-related posttraumatic stress disorder (4). These stages do not necessarily imply a stepwise course of recovery or deterioration but, rather, serve as an index of adaptability and containment or, on the contrary, measure the degree to which coping has failed.

Uncomplicated Reactivation

Eight (23%) of the 35 soldiers experienced uncomplicated reactivation of posttraumatic stress disorder. These individuals demonstrated the highest degree of functioning after having suffered an earlier combat stress reaction. This patient population consisted of soldiers who had either been diagnosed as having a combat stress reaction as such or had suffered from an immediate, undiagnosed combat stress syndrome. Subsequently, they seemed to have completely recovered from the effects of their traumatic experiences and were symptom free. On call-up to the 1982 Lebanon War, however, they developed full-blown posttraumatic stress disorder after being exposed to a battle situation.

Case 1. This 28-year-old kibbutz member was married and the father of one child. He had been in regular service with the armored division in the 1973 war. His battalion participated in intense battles and suffered many casualties. He had volunteered to rescue wounded comrades under direct fire at great personal risk; he ceased only after sustaining a mild injury. After resuming his combatant role following medical treatment, he was the only one to escape alive when a grenade was thrown into his armored personnel carrier. Following this traumatic incident he developed combat stress reaction. He was referred for psychiatric treatment, and his military profile (the Israel Defense Forces physical and mental fitness rating that indicates the soldier's ability to function militarily) was temporarily lowered. With treatment, his symptoms receded and his military fitness rating was increased at his request. Between the wars he trained with his new unit, functioned well, and established good social ties with both peers and commanders. He was also successful in his personal life. He married a fellow member of his kibbutz, completed studies in electronics, and was satisfactorily employed in his new profession.

When the 1982 Lebanon War broke out, he was mobilized with his battalion and functioned adequately. During combat, however, the convoy in which he was riding was ambushed and his armored personnel carrier sustained a direct hit. This event closely resembled his experience in the 1973 war, and, as he put it, "It aroused what was dormant inside of me for 9 whole years." The patient reacted with

depressed mood, loss of appetite, irritability, concentration problems, and sleep disturbances. When the distressing symptoms became unbearable, he turned to his battalion surgeon for help.

Heightened Vulnerability

The second major category of recurrent posttraumatic stress disorder included 27 soldiers whose first episode of combat stress reaction left a residual of stress, rendering them more vulnerable to further episodes. The degree of this heightened vulnerability varied considerably. Some soldiers were apparently able to resume their premorbid level of functioning in all spheres of life; their increased sensitivity was confined to certain military stimuli exclusively. In others, a more generalized sensitivity developed to stimuli far removed from the original trauma. Finally, a more chronic impairment in both civilian and military functioning following the 1973 combat stress reaction was evidenced. Each of these subcategories is illustrated here by a brief clinical example.

Specific sensitivity. Eighteen (51%) of the 35 soldiers, despite persistent minor and diffuse symptoms resulting from the 1973 war, succeeded in their overall professional and social functioning. They also did well during their occasional uneventful periods of reserve duty, despite a rise in their tension level. However, these men demonstrated a specific sensitivity in that specific stimuli reminiscent of the original trauma retained the power to reactivate the disorder. When these men encountered stimuli directly related to the original trauma, the intensity of their posttraumatic stress disorder symptoms increased. Specifically, during their reserve service, these soldiers often exhibited stress-related symptoms such as hypersensitivity to noise (particularly weapons), reduced appetite, diarrhea, and increased anxiety. These distressing symptoms, however, did not severely impede their performance. These soldiers had invested much effort in coping, predominantly using the mechanisms of denial and repression to enable them to function adequately. Their heightened sensitivity to specific military stimuli, however, became more apparent when the Lebanon War broke out in 1982. Most of the soldiers in this group reacted with high anticipatory anxiety on receiving the order to report to active service. After they were mobilized and entered the military domain, they responded with exacerbated stress to relatively minor events that reminded them of their earlier traumatic experiences. In many of these instances, reactivation of a residual or subthreshold posttraumatic stress disorder to full-blown posttraumatic stress disorder occurred without any substantial combat exposure.

Case 2. This 27-year-old self-employed man was married and the father of three children. He had done his regular service in 1973, when he was caught up in the Yom Kippur War. Following intense battle exposure he developed combat stress reaction. For a period of several months both his military and his civilian functioning were severely impaired.

Gradual improvement was noted, and the occurrence of nightmares and intrusive recollections of the war was reduced to approximately once a month. He was able to rehabilitate his personal life: he married and went into private business with much success.

Although his civilian functioning appeared to be unimpaired, specific sensitivity was noted to military settings during his annual reserve duty. During his reserve service between the 1973 and 1982 wars, he felt anxious and depressed and was somewhat withdrawn, although he did not disclose his feelings to his peers. In fact, he maintained adequate military functioning and demonstrated high motivation to continue to serve in the army. As a result, his military fitness rating was raised.

When called up for the 1982 Lebanon War, however, he was flooded with anxiety. He was bothered by nightmares and suffered from nocturnal enuresis. During the daytime he was also very fearful and, as he put it, "frightened to death." He would not part with his helmet. Nonetheless, he did not request release from his duties, which he continued to fulfill adequately. He sought psychiatric treatment only after the cease-fire came into effect.

Moderate generalized sensitivity. The original sensitization of three (9%) of the 35 soldiers had generalized. These men displayed an acute stress reaction to stimuli that were only remotely related or apparently totally unrelated to the original trauma. As a consequence, they experienced a high degree of suffering that permeated many areas of their lives. Symptoms of posttraumatic stress disorder were apparent in civilian settings, and these symptoms increased in military atmospheres. These men reported sleep disturbances, nightmares, anxiety, irritability, and uncontrollable outbursts of anger. They tried in various ways to avoid dealing with situations that aroused acute anxiety, but they were not very successful in reducing their anxiety. To attain mastery, some of them used phobic mechanisms, and others reported using alcohol and drugs. Their symptoms were accompanied by some impairment of functioning in both civilian and military settings. Yet, despite their generalized sensitivity, these men continued to serve in the reserves. When the orders for the 1982 war were issued, they experienced intense anticipatory anxiety that severely hindered their capacity as combatants. Some of them reacted with a full-blown syndrome following minor military stimuli and were discharged without entering the battlefield or participating in actual battles.

Case 3. This 36-year-old tank crewman was married and had three children. He had been engaged in heavy battles during the 1973 Yom Kippur War; his unit suffered many casualties. When riding in an armored personnel carrier, he witnessed the gruesome death of his commander and several close friends. Subsequently, he developed a dissociative reaction that later crystallized into chronic posttraumatic stress disorder. The stress symptoms that persisted included sleep disturbances, nightmares, intrusive thoughts, and depressed mood. Between 1973 and 1982 he gradually improved, and the frequency and intensity of posttraumatic stress disorder symptoms declined somewhat. Despite his distress, the patient refused psychiatric treatment and was reluctant to share his feelings with his peers. At his own

initiative, his military fitness rating was restored to its prewar level, and he resumed membership in his original unit in the reserve forces. In the 9-year period between the wars he was constantly troubled by debilitating symptoms of posttraumatic stress disorder, yet he maintained a limited but acceptable level of functioning in both civilian and military settings. Exacerbation of symptoms occurred during his periodic reserve duty, evidenced by severe anxiety, sleep disturbances, markedly reduced appetite, and recurrent flashbacks to scenes he had witnessed in the 1973 war. The patient reported that during these periods of reserve duty he was haunted by the fear that something horrible was about to happen and that it would result in his death. Somehow, however, he continued to do reserve service.

When mobilized for the 1982 war, he reacted with severe anticipatory anxiety and marked intensification of posttraumatic stress disorder symptoms. Most prevalent were intrusive recollections of his experiences in the 1973 war. Although he did not take part in active combat and was stationed near the front but not at it, he exhibited a full-blown stress reaction; his symptoms severely impaired his military functioning. At this point he sought help. He revealed in therapy that the scenes he had witnessed in 1973 were so horrible and shocking that they had haunted him ever since. He feared that they were indelible and would haunt him until he died.

Severe generalized sensitivity. Six (17%) of the 35 soldiers displayed more or less total inability to function in any setting; mobilization emphasized this global incapacity. The soldiers in this group were still listed (by oversight) on the army active roster. They were called up for but did not take part in combat in the 1982 Lebanon War. The arrival of the call-up note in the mail worsened their condition to such an extent that they experienced more or less immediate, severe, paralyzing anticipatory anxiety.

Case 4. This 33-year-old man was married and had one child. He had suffered constantly from nightmares, concentration difficulties, sensitivity to noise, and constant anxiety since serving in the Yom Kippur War. During the years his fears had widened: he began to fear terrorists, strangers, and dark places. He kept a gun in his home and would constantly search for shelter while walking down the street in case an emergency should arise. His fears always became more severe during reserve duty. He did not receive any treatment for his condition and tried to hide his symptoms, especially from his wife.

When he received his call-up for the 1982 Lebanon War, he suffered acute anxiety that became progressively more severe. Within less than a week of starting to serve his reserve duty, which did not entail actual combat, he asked to see the company physician and was sent to a mental health treatment facility. Here he was diagnosed as suffering from severe posttraumatic stress disorder, with symptoms of trembling, heavy perspiration, asthma, and depression. After initial preliminary treatment, he was released from duty and discharged as unfit for service.

DISCUSSION

Close scrutiny of our data clearly indicates that reactivation of war-related trauma is a complex phe-

nomenon that may take various forms. Two major groups, or degrees, of reactivated posttraumatic stress disorder were delineated. Uncomplicated or classical reactivation was assessed in eight (23%) of the 35 soldiers. These individuals appeared to have completely recovered from their first episode of combat stress reaction, were symptom free, and had resumed their full level of premorbid functioning in the period between the 1973 Yom Kippur War and the 1982 Lebanon War. Heightened vulnerability and exacerbation of residual posttraumatic stress disorder symptoms ensued in the majority of the sample—27 (77%) of the 35 soldiers—but the symptoms varied considerably in breadth and intensity. In this group, who seemed to have resumed their prewar level of functioning and seemed unaffected in all other spheres of life, 18 of the men showed specific sensitivity to military stimuli. In nine other men in this group, however, a deeper, more generalized sensitivity to stress was evident. This generalized sensitivity exerted a differential effect, somewhat debilitating three and severely incapacitating six. In these soldiers exacerbation of residual symptoms rather than reactivation of latent posttraumatic stress disorder was observed.

These data are consistent with earlier clinical evidence (5) suggesting that traumatic experiences scar the traumatized individuals, weakening their resilience to future stress. Furthermore, even when individuals seem to have resolved their reaction to trauma, heightened vulnerability that is easily reawakened often ensues. Our data indicate a considerable variability in the depth of this residual vulnerability. This vulnerability is most apparent in response to stimuli directly reminiscent of the original trauma, but it is not restricted to such stimuli. It appears that even when combat-related posttraumatic stress disorder remits or, on the other hand, persists and evolves into a more stable form, the afflicted person may become highly sensitized to stress in general. He is permanently altered, harboring the potential for a future response on reexposure to threatening stimuli (11).

The type and intensity of the later stressor that serves as a precipitating factor for the reactivated and/or exacerbated posttraumatic stress disorder deserves special attention. Our data clearly indicate that soldiers who had previously suffered from posttraumatic stress disorder may collapse years later even under relatively moderate combat stress. Furthermore, hypersensitivity to military stimuli, once established, may turn into more generalized sensitivity in many areas. This means that the development of a full-blown posttraumatic stress disorder may be induced by a wide range of less specific stimuli, such as life events completely unrelated to war. This observation is consistent with earlier observations of reactivated war trauma in U.S. veterans (9).

Psychiatric symptoms and impaired social functioning are two facets of residual posttraumatic symptoms that are often observed following exposure to extreme stress. Interestingly, although all of our subjects suf-

ferred from some stress-related symptoms, their level of functioning was generally impaired much less than their symptoms would lead one to expect. The 26 soldiers who experienced uncomplicated reactivation or specific sensitivity, who constituted 74% of the sample, reported no impairment in either civilian or military functioning. The nine soldiers with more generalized sensitivity exhibited considerable stress-related symptoms coupled with somewhat restricted functioning. Results indicate that residuals of combat stress are expressed mainly by psychiatric symptoms and to a lesser degree by impaired social functioning.

A pertinent issue with regard to prognosis is the role that repeated exposure to stress plays in recovery from posttraumatic stress disorder. There are two contradictory perspectives. The first contends that repeated stress strengthens the individual's coping and promotes resilience in the face of future adversity (12, 13). The second postulates that repeated stress results in depleted resources, rendering the individual more vulnerable when confronted with lesser stress (14). Of particular interest is the question of what effect repeated exposure to military stimuli has on casualties with combat-related posttraumatic stress disorder. Does it operate to extinguish the disorder, or does it retard recovery? The unfortunate reality for many Israelis entails considerable stress in the form of both frequent intense wars and sporadic terrorist activities. A sizable percentage of the male population not only participates in wars but also continues to serve in the active reserve. Unlike the discharged U.S. soldier, for example, who has little chance of being exposed to combat or other military conditions again, the Israeli soldier is frequently exposed to such stimuli. These circumstances allow for testing the validity of the two perspectives. Our data suggest that repeated sporadic exposure, especially periods of service in the reserve, reactivates latent memories of traumatic war experiences, delaying spontaneous recovery and impeding full recovery from posttraumatic stress disorder.

The residual stress reported by most of our subjects between wars was indicative of their vulnerability. It may be that the damages of early traumatic experiences had not been adequately treated. More than half of the afflicted soldiers in the sample who had been in treatment dropped out. In the majority of the cases reviewed here, there was evidence that the soldiers went to great lengths to hide their mental state from their commanders, comrades, friends, and even close family. Their symptoms were accompanied by feelings of shame, guilt, and lowered self-esteem. In Israel,

where the army is highly valued as a necessary means for survival, male identity is strongly linked to military functioning. Given this background, feelings of shame and guilt over debilitating residual symptoms of combat stress reaction are easily understood. It seems that the social norms and the resultant reluctance to admit to problems and seek professional help may be possible intervening variables that increase the risk for reactivation of posttraumatic stress disorder in this particular population.

In conclusion, we feel that the major contribution of this exploratory study is that it casts light for the first time on the reactivation of posttraumatic stress disorder during reexposure to combat. This study is only a first step in increasing our understanding of reactivation, its incidence, its course, and its correlates. More systematic longitudinal studies with adequate controls are called for.

REFERENCES

1. Stouffer S: *The American Soldier*, vol II: *Combat and Its Aftermath*. Princeton, NJ, Princeton University Press, 1949
2. Kardiner A, Spiegel H: *War Stress and Neurotic Illness*. New York, Hoeber, 1947
3. Titchner JL, Ross WD: Acute or chronic stress as determinants of behavior, character, and neuroses, in *American Handbook of Psychiatry*, vol III. Arieti S, editor-in-chief. New York, Basic Books, 1974
4. Garb R, Bleich A, Solomon Z, et al: Varieties of combat reactions—an immunological metaphor. *Br J Psychiatry* (in press)
5. Silver RL, Wortman CB: Coping with undesirable life events, in *Human Helplessness*. Edited by Garber J, Seligman MEP. New York, Academic Press, 1980
6. Lindemann E: Symptomatology and management of acute grief. *Am J Psychiatry* 1944; 101:141–148
7. Weiner A, Gerber I, Battim D, et al: The process and phenomenology of bereavement, in *Bereavement: Its Psychological Aspects*. Edited by Schoenberg B, Gerber I, Weiner A, et al. New York, Columbia University Press, 1975
8. Burgess AW, Holmstrom LL: Rape trauma syndrome. *Am J Psychiatry* 1974; 131:981–986
9. Christenson RM, Walker JL, Ross DR, et al: Reactivation of traumatic conflicts. *Am J Psychiatry* 1981; 138:984–985
10. Archibald HC, Tuddenham RD: Persistent stress reaction after combat. *Arch Gen Psychiatry* 1965; 12:475–481
11. Solomon Z, Oppenheimer B, Noy S: Subsequent military adjustment of combat stress reaction casualties—a nine year follow-up study. *Milit Med* 1986; 151:8–11
12. Coleman JC, Burcher JN, Carson RC: *Abnormal Psychology and Modern Life*, 6th ed. Glenview, Ill, Scott, Foresman, 1980
13. Keinan G: The effects of personality and training variables on the experienced stress and quality of performance in situations where physical integrity is threatened (doctoral dissertation). Tel-Aviv, Tel-Aviv University Department of Psychology, 1980
14. Selye H: *The Stress of Life*. New York, McGraw-Hill, 1956