Psychiatric Consequences of WTC Collapse and The Gulf War*

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ABSTRACT
Along with political, economic, ethical, rehabilitative and military dimensions, psychopathological sequelae of war and terrorism also deserve our attention. The terrorist attack on the World Trade Centre (W.T.C.) in 2001 and the Gulf War of 1990-91 gave rise to a number of psychiatric disturbances in the population, both adult and children, mainly in the form of Post-traumatic Stress disorder (PTSD). Nearly 75,000 people suffered psychological problems in South Manhattan alone due to that one terrorist attack on the WTC in New York and the Pentagon in Washington. In Gulf War I, more than 1,00,000 US veterans reported a number of health problems on returning from war, whose claims the concerned government has denied in more than 90% cases. Extensive and comprehensive neurological damage to the brain of Gulf War I veterans has been reported by one study, as has damage to the basal ganglia in another, and Amyotrophic Lateral Sclerosis (ALS) in a third, possibly due to genetic mutations induced by exposure to biological and chemical agents, fumes from burning oil wells, landfills, mustard or other nerve gases. The recent Gulf War will no doubt give rise its own crop of PTSD and related disorders. In a cost-benefit analysis of the post Gulf War II scenario, the psychopathological effects of war and terrorism should become part of the social audit any civilized society engages in. Enlightened public opinion must become aware of the wider ramifications of war and terrorism so that appropriate action plans can be worked out.

Key Terms: Gulf War, Gulf War Syndrome, Post Traumatic Stress Disorder, Terrorism, Psychopathology of War and Terrorism, Organic Brain Damage due to Chemical Warfare.

Till a few months back, the Allied forces and President Saddam Hussein’s regime were engaged in a struggle for the control of Iraq’s future. Political and defence experts were busy analysing the various ramifications of that war, as were the economic pundits who were

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looking into the global financial implications. Anti-war activists and peace workers, as also the U.N., the Red Cross and other humanitarian organizations, continued to be concerned with the ethical, rehabilitative and human dimensions of Gulf War II. All these were no doubt highly important issues which deserved our attention. One another dimension, which we should not miss in this whole picture, was the psychopathological sequelae of this war in particular, as indeed of war and strife in general. A brief peep into the psychiatric disturbances in the aftermath of the terrorist attack on the World Trade Center in 2001, and the Gulf War of 1990-91, may provide us with some insight into what we may expect in Gulf War II.

The terrorist attack of September 11, 2001, which destroyed the World Trade Center in New York City and damaged the Pentagon in Washington, resulted in over 3500 deaths and injuries. It also traumatized a nation. Many American citizens required psychiatric treatment. A National Survey of 540 US adults, taken three to five days after the event and published in The New England Journal of Medicine, 2001, found definite evidence of psychiatric disturbances in these adults and their children (Schuster, Stein and Jaycox et al, 2001). Forty four percent adults reported one or more substantial stress symptoms. These included insomnia, nightmares, fearfulness, irritability and distressing recollections of the event. Thirty five percent of children had one or more stress symptoms. One interesting fact which emerged was that the level of stress was associated with television viewing of the disaster. So much for live coverage of such large scale disasters. (However, greater chance of psychiatric disturbances were found in those with a past history of psychiatric disorder, or those who had suffered significant stress in the recent past. A brief note of caution to that effect during live T.V. coverage of such events may help reduce distress to some extent.)

Most of us know that psychiatrists describe a syndrome that develops after a person sees, or is involved in, or hears of, an extreme traumatic stressor. The person reacts to this experience with fear and helplessness, persistently relives the event and tries to avoid being reminded of it. These symptoms significantly affect important areas of his life, like family and work. This syndrome is called Post-traumatic
Stress Disorder (PTSD), or Acute Stress Disorder (if it occurs within 4 weeks of the event and remits within 2 days to 4 weeks). These disorders arise from experiences in war, torture, natural catastrophes, assaults, rape, serious accidents, fire to buildings etc. In our country India, we see this phenomenon as an aftermath of communal riots as well. The latest example of a fresh crop of PTSDs was after the post-Godhra riots which rocked Gujarat State in 2002.

But let us continue with the WTC terrorist attack. The New England Journal of Medicine in 2002 published a study of a later survey of Manhattan residents conducted 5-8 weeks after the World Trade Center collapse (Galea, Ahern and Resnick et al., 2002). 7.5% of residents had PTSD and 9.7% had depression. This meant 67,000 people had PTSD and approximately 87,000 had depression during the time of the study. Even allowing for estimated prevalence of current psychopathology, nearly half the estimated sample, that is, more than 75,000 South Manhattan residents suffered psychological disorders due to that one terrorist attack alone*.

Higher rates for all these conditions were found in those living close to the disaster site and those exposed to prior but unrelated traumatic events. Thus, geographic proximity and stressful life events correlated closely with development of PTSD. This can become an important guideline for any subsequent work planned for such victims.

**Gulf War Syndrome**

So much for the Sept. 11, 2001, attack. Let us go back a little in history to Gulf War I. This war against Iraq, which began in 1990 and ended in 1991, involved 6,97,000 American soldiers, 45,000 soldiers from Great Britain and 4,500 soldiers from Canada. More than 1,00,000 US veterans reported a number of health problems on returning from war. These included irritability, muscle and joint pain, migraine headache, shortness of breath, digestive disturbances, hair loss, rashes, forgetfulness and difficulty with concentration. Collectively, these symptoms were called the Gulf War Syndrome.

*There is a dearth of psychiatric data about PTSD and/or clinical depression following terrorist attacks in the Indian context which needs urgent attention by Indian researchers. This has been noted by the present President of the Indian Psychiatric Society while quoting from this article in his Presidential Address (Trivedi, 2004 p.10). MSM would be interested in responses from readers about systematic research carried out on this topic.(-Eds.)
There is incontrovertible evidence of organic brain damage emerging in peer-reviewed literature. Haley and colleagues, using clinical tests and Magnetic Resonance Spectroscopy (MRS), demonstrated extensive and comprehensive neurological damage with significant biochemical changes in the brains of Gulf War veterans (Haley, Marshall and McDonald et. al., 2000).

and joint pain, migraine headache, shortness of breath, digestive disturbances, hair loss, rashes, forgetfulness and difficulty with concentration. Collectively, these symptoms were called the Gulf War Syndrome. After the recent Gulf War, there is bound to be a fresh crop of victims of this syndrome.

Many veterans believed this disorder was caused due to exposure to biological and chemical agents, fumes from burning oil wells, and landfills or mustard or other nerve gases. The US Defense Department acknowledged that up to 20,000 troops may have been exposed to chemical weapons but denied that those complaining of the syndrome were suffering because of the effects of chemical exposure.* Claims submitted by Gulf War veterans seeking disability payments were denied in over 90% cases. The morale of thousands of affected Gulf War veterans got seriously eroded. Confidence in the U.S. Defense Department’s concern for illness amongst soldiers was compromised in the public mind as a result. The repercussions of a fresh crop of war veterans with similar symptoms which will no doubt result after Gulf War II is anybody’s guess. This is not to hold any brief for the despotic Iraqi regime but only to highlight the enormous psychopathological consequences of war that power wielders force on the unsuspecting public and the loyal troops.

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*May be, we can take solace in the fact that bureaucratic callousness is not limited to India alone.

** Whether the hippocampus also plays a role in PTSD remains a controversial issue, although it has occupied the attention of some researchers (Bremner, 2001; Pitman, 2001). The average volume of the hippocampal region is found lowered in soldiers involved in combat operations. How specific is this change is an area of challenging future enquiry.
et. al., 2000), as can Amyotrophic Lateral Sclerosis (ALS), or Lou Gehrig’s disease, thought to be due to genetic mutations, according to a third (Charatan, 2002). To be fair, the US Defense Department did agree to pay compensation to veterans who developed ALS. The vast majority of others are still waiting for the benevolent gaze of bureaucrats and leaders who never tire of waxing eloquent about the loyalty and patriotism of their troops when they send them to war.

**Delving into History**

A number of eponyms of PTSD have been described in the wars that have taken place in the West till now (Hyams, Wignall and Roswell, 1996). During the American Civil War, a condition was described called the Irritable Heart. In World War I, it was called Effort Syndrome. In World War II, it became Combat Stress Reaction. During the Vietnam War it came to be called Post Traumatic Stress Disorder which name has, by and far, stuck. During Gulf War I it came to be called the Gulf War Syndrome and after the Second Gulf War I, it is likely to be labelled the Gulf War II Syndrome, or something to that effect. All these disorders, if seriously studied, involved certain symptoms in common. These were fatigue, shortness of breath, palpitations, headache, excessive sweating, dizziness, disturbed sleep, fainting (difficulty in concentration and forgetfulness as symptoms were added to PTSD and Gulf War Syndrome). Thus, these are only different names for the same phenomenon. What is heartening to note is that they are amenable to psychiatric treatment with psychotherapy and psychotropic medication.

Numerous psychopharmacological agents are found useful in PTSD, mainly the Selective Serotonin Re-uptake Inhibitors (SSRIs) like sertraline, paroxetine and also fluoxetine. Even tricyclics like imipramine and amitryptaline have a role to play in therapeutic doses (that is, as used to treat depression, a therapeutic trial lasting for eight weeks atleast, with medication continued for atleast one
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year before withdrawal can be thought of). Haloperidol or other potent antipsychotic may be used to control agitation and/or aggression that may accompany the PTSD.

Psychotherapy of the psycho-dynamic type, including abreaction and resultant catharsis, can be useful, care being taken to avoid this in the psychotic patient. Behaviour therapy, cognitive therapy and hypnosis also have a role to play, as do removal from sources of stress, support from family and friends, and encouragement to relax and ensuring good sleep (if necessary with appropriate medication). EMDR (Eye Movement Desensitization and Reprocessing) also helps, even in children (Chemtob, Nakashima and Carlson, 2002). Group therapy can be useful as it helps sharing of the traumatic experience with others. Similarly, family therapy can be useful to enlist support of the spouse in helping the patient overcome the traumatic experience.

Concluding Remarks

Gulf War II is over and, as said earlier, will give rise to its own volume of PTSDs. The people involved, as the government and the soldiers, will no doubt have to bear the brunt. The high cost in terms of morbidity and mortality that war and terrorist attacks entail, both physical and psychiatric, is a cost governments and leaders must bear in mind as they engage in efforts at restructuring and regulating nations and peoples.

Human beings, of course, have their own compulsions to behave as they do. The mind, moreover, is adept at rationalizing and justifying every action and behaviour. This applies as much to warmongers as terrorist think-tanks. Political leaders and fundamentalist ideologues are great masters at finding such justification and convincing people at large with their rhetoric. Not that they do not have an agenda; but it is up to the people to realize what that agenda entails, for now and the future.

In a cost-benefit analysis of the post Gulf War II scenario, along
with the economic-political-military-rehabilitative fallout, the psychological trauma that war and terrorism entails should also become part of the social audit a civilized society engages in.

If terrorism could get justice, and wars could combat terrorism, then this world would indeed have become a neat, unipolar world, suited to the designs and machinations of terrorist ideologues and international leaders wanting to make their mark in World History as it gets written. Fortunately, it is not a neat world, neither it is unipolar. It is time for people to reject the straitjacket that such leaders wish to put on them. It is also time for people to enjoy their multipolarity.

The rejection has to come from the people. The people who are led by the terrorists. And the people who are led to war.

When will they remove the blindfold? Or, not avoid seeing that which is best seen uncovered?

When will they allow Buddha, Christ and Gandhi to rest in peace and avoid turning in their graves?

References:

1 Bremner J.D., (2001), Hypotheses and controversies related to effects of stress on the hippocampus : an argument for stress-induced damage to the hippocampus in patients with posttraumatic stress disorder, Hippocampus, 11, 2, 75-81.

2 Charatan F., (2002), US links motor neuron disease with Gulf War service, Brit. Med. Jr., 324, 65.

3 Chemtob C.M., Nakashima J., Carlson J.G., (2002), Brief treatment for elementary school children with disaster related posttraumatic stress disorder : A field study, J. Clinic Psychol., 58, 1, 99-112.
4 Galea S., Ahern J., Resnick P., Kilpatrick D., Bucuvalas M., Gold J., Vlahav D., (2002), Psychological sequelae of the September 11 2001 terrorist attacks in New York City, N. Eng. Jr. Med., 346, 13, 982-987.

5 Haley R. W., Marshall W. W., McDonald G.G., Daugherty M. A., Petty F. and Fleckenstein J.L. (2000), Brain Abnormalities in Gulf War Syndrome: Evaluation with 1HMR Spectroscopy, Radiology, 215, 807-817.

6 Haley R. W., Fleckenstein J.L., Marshall W. W., McDonald G.G., Kramer G.L., and Petty F. (2000), Effect of basal ganglia injury on central dopamine activity in Gulf war syndrome: Arch. Neurol., 57, 1281-1285.

7 Hyams K.C., Wignall F.S., Roswell P., (1996), War, syndromes and their evaluation: from the US Civil War to the Persian Gulf War, Ann. Intern. Med., 125, 398-405.

8 Pitman R.K., (2001), Hippocampal diminution in PTSD: more (or less?) than meets the eye, Hippocampus, 11, 2, 73-74.

9 Schuster, M.A., Stein, B.D., Jaycox, L.H., Collins, R.L., Marshall, G.N., Elliott, M.N., Zhou, A.J., Kanouse, D.E., Morrison, J.L., Berry, S.H., (2001), A national survey of stress reactions after the September 11, 2001, terrorist attacks, N. Eng. J. Med., 345, 20, 1507-1512.

10 Trivedi, J. K., (2004), Presidential Address: Terrorism and Mental Health, Ind. Jr. Psychiatry, 46(1), 7-14.
Questions that the First Monograph raises

Q.1. What are the various psychiatric disturbances, apart from those noted in this monograph, which result from war, terrorist attacks, communal conflicts etc., that have been reported in various research studies in different parts of the world?

Q.2. What have been the psychiatric disturbances reported in Indian studies following the numerous terrorist attacks and the communal riots in India? What have been the psychiatric sequelae of the various wars in which India was engaged?

Q.3. The terrorist is the product of a certain ideology and resultant training. What is it?

Q.4. Can terrorist acts be justified under any circumstances?

Q.5. Can responding to terrorist threats in the form of waging wars be justified? Is it proper to raise propagandist slogans to denounce opponents in war (e.g., the slogan ‘Weapons of Mass Destruction’, WMD, raised as a justification for Gulf War II)?

Q.6. Should despotic regimes be overthrown by democratic governments to liberate the people, if the people of the country feel powerless to do so?

Q.7. What mechanisms should be put in order by mental health workers, social activists, NGOs, International organisations, governments etc., to tackle the psychopathological fall-out of terrorist attacks and postwar health problems?

Q.8. Should the plight of the common man and the war veteran be considered a necessary price to pay in any war, or should it become a deterrent to leaders planning future wars?

Q.9. If warmongers have a duty to society, do terrorists and their think-tanks have an equally important duty? How are these two to be balanced to ensure minimum of psychopathological disturbance for the common man?

Q.10. What can the common man do to stop being manipulated by both war-mongers and terrorist think-tanks, or being browbeaten into submission by despotic regimes?

Q.11. Is there another way to looking at this problem?