

Original Article

POST-TRAUMATIC STRESS DISORDER AMONG THE SURVIVORS OF A BOMB BLAST

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ABSTRACT:

Objectives: To study the prevalence of post-traumatic stress disorder among the survivors of a bomb blast which occurred in a religious gathering at Bhakkar.

Design: A cross-sectional survey of the survivors.

Setting: District Head Quarter Hospital, Bhakkar.

Subjects: All of the survivors of the bomb blast who were still in hospital at the time of study.

Main outcome measures: PTSD reaction index and revised impact of event scale.

Results: Out of 11 survivors studied 9 (82%) fulfilled the criteria for PTSD. Mean age of the victims was 23 years. PTSD was more common in patients who had witnessed the death of close relative or sustained injuries themselves.

Conclusions: PTSD is common in this part of the world. There is a need to develop instruments and scales for use in Pakistan.

KEY WORDS: PTSD, Prevalence.

Pak J Med Sci July - September 2003 Vol. 19 No. 3 169-171.

INTRODUCTION

The term post-traumatic stress disorder (PTSD) denotes an intense prolonged and sometimes delayed reaction to an intensely stressful event. The essential features of a

post-traumatic stress disorder are hyper arousal, re-experiencing of aspects of the stressful events, and avoidance of reminders¹. Examples of extreme stressors that may cause this disorder are natural disasters such as floods and earthquakes, man-made calamities such as major fires, terrorist attacks, serious transport accidents, or the circumstances of war, and rape or serious physical assault on the person. The term post-traumatic stress disorder is a relatively new term in psychiatric nosology. During the past two decades post-traumatic reactions to disasters have been investigated systematically². Terrorist attacks and bomb blasts have been occurring in the past but after the 9/11 incidents they have attracted more public attention.

Major catastrophes represent important opportunities to examine the responses of individuals to a single, extreme, well-defined stressor. This allows investigation of variables within the disaster unique to each individual's experience. In particular, major catastrophes

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* *Received for publication:* February 24, 2003

Accepted: March 25, 2003

afford the opportunity to study the interaction between features of the traumatic event, the individuals and their circumstances in relation to outcome³. Hull et al (2002) performed a unique long-term follow-up study of the survivors of the world's worst oil platform disaster, the Piper Alpha disaster. Twenty-one percent of the survivors were still meeting the most stringent diagnostic criteria for post-traumatic stress disorder (PTSD) over 10 years after the disaster³. Prevalence of PTSD among groups subjected to unusual stress has been reported to be from 4% to 45%¹.

A bomb blast occurred at Bhakkar in April 2002 in a religious gathering. Victims were all women and children as this blast occurred in the female section of the gathering. A team comprising of two psychiatrists and a psychologist was sent by the Government of Punjab from Lahore to Bhakkar to provide psychiatric assessment and treatment of survivors. Visit of team happened 35 days after the incident and it gave us the opportunity to study the psychiatric complications among the survivors of the bomb blast.

PATIENTS AND METHODS

When we visited Bhakkar eleven survivors were still in hospital. They all agreed to be interviewed. They were all present in the gathering where bomb blast had occurred. Their demographic details were noted including their age, marital status, and socioeconomic status. It was noted whether they witnessed the death of a family member and whether they themselves were injured. Symptoms were recorded and detailed mental state examination was done.

Revised impact of event scale⁴, and PTSD reaction index⁵ were administered. Revised impact of event scale is a self-reporting scale consisting of 15 questions. PTSD reaction index is a scale, which is used in an interview format with the items being marked as being present or absent. A total score of 7 or more indicates a mild level of PTSD, a score of 10 to 12 indicates a moderate level and a score of 12 or more indicates a severe level of PTSD.

RESULTS

Subjects:

All eleven survivors were interviewed. All were females as bomb blast had occurred in the female section of the religious gathering. Mean age of the sample was 23 years (range 10-70 years). Four females did not have any schooling while rest had mean education of 5 years. Six females were single while 5 were married. There was no divorced or separated female. Almost all were from the lower socioeconomic background. Mean number of siblings was 6.

Personal experience:

Majority of survivors had witnessed their close relatives dying or being seriously injured. All eleven survivors were injured themselves and they had sustained moderate to severe injuries. Ten out of 11 became unconscious immediately after the blast. One remained unconscious for 48 hours and 9 had remained unconscious for 1 to 12 hours. Seven out of eleven survivors remembered the event very clearly while rest had some difficulty in remembering the event.

Prevalence of PTSD:

Nine out of 11 (82%) met the diagnostic criteria of PTSD according to the scales used. Seven of them had mild PTSD while one each met the criteria for moderate and severe levels of PTSD.

Relationship of PTSD with different variables:

PTSD had a significant relationship with the age of survivors. Two females who did not have features of PTSD were both above 35 years of age while all females suffering from PTSD were below that age. Educational status, marital status and socioeconomic status did not have statistically significant relationship with PTSD ($p > 0.05$).

Witnessing a close relative dying or being seriously injured had a significant relationship with the development of PTSD. Survivors who had moderate or severe PTSD had witnessed their near relative dying in the bomb blast. Two

survivors who did not develop PTSD had not seen any near relative dying in the bomb blast. The difference was statistically highly significant ($p < 0.01$).

Injury sustained by the survivors themselves had significant relationship with the onset of PTSD. Patients who were seriously injured or remained unconscious for more than 2 hours had increased chances of having PTSD than those who did not sustain serious injuries ($p < 0.05$).

DISCUSSION

Post-traumatic stress disorder is one of the least researched topics in Pakistan. Present study has shown some important results. Terrorist attacks have been occurring frequently in Pakistan over the last three decades. Frequency of bomb blasts increased during the Soviet invasion of Afghanistan. Last decade witnessed increase in sectarian violence and bomb blasts started occurring in mosques and other religious places. Psychiatric complications of these disasters have not been studied systematically in Pakistan. Present paper is an attempt to stress the importance of psychological aspects of these incidents. In the management of survivors psychological aspects should not be neglected.

Results of this study have shown that post-traumatic stress disorder is common in our part of the world. Eighty-two per cent of the survivors exhibited features of PTSD 35 days after the bomb blast. In one study PTSD after rape was reported in 94% of females immediately after the assault and in 47% after 3 months⁶. Prevalence in present study is similar but is higher compared to some other reports from the West⁷.

It is possible that prevalence reported in present study may be an overestimation because only those survivors were studied who were still in hospital. Victims who did not develop PTSD might have been discharged before our team arrived at Bhakkar.

Majority of the survivors were very young. Mean age was only 23 years. Young individuals might be more vulnerable to develop PTSD.

In the present study there were only two females who were above the age of 35 years and they did not develop PTSD while the rest were younger than 35 and they all developed PTSD. This study showed that witnessing a close relative dying or sustaining serious injuries made the person more vulnerable to have PTSD. Previous research has also shown that serious threat to the life of the individual increases the chances of having PTSD¹.

Limitations and shortcomings of the study:

1. Main shortcoming of the study was its small sample size.
2. There was no male in the sample.
3. Results cannot be generalized with confidence.
4. It was a cross-sectional study. Patients were not followed up.
5. Instruments developed in the west were used and they may not have the same validity in this part of the world.

In spite of the above limitations this study has shown that PTSD is an important topic of research in our population. There is a need to develop instruments and scales with proven validity for use in this country.

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