

POST TRAUMATIC STRESS DISORDERS SYMPTOMS AFTER BAM EARTHQUAKE

M. Yassini¹, Fr Hosseini²

ABSTRACT

Objectives: Iran is one of the top 10 countries where earthquake is one of the main problems. In devastating Bam earthquake of September 2003, more than four thousand people were killed and almost 100% of buildings were destroyed. This study is an evaluation of the traumatic effect of this disaster on survivors.

Patients and Methods: Three month after the earthquake, two hundred twenty six survivors who were referred to health services centers were enrolled in completing a questionnaire which included demographic data, risk factors and SIP (Top-8) PTSD screening.

Results: Two hundred and one (89.2%) of respondents had PTSD symptoms, 62% had physical injury and 67.7% had a loss of close family member. There was a positive personal psychological history in 38.7% and positive family history of psychological problem in 42.8% of cases. PTSD symptoms were severe in 34%, moderate in 30% and mild in 28%.

Conclusion: There is a higher incidence and severity of PTSD symptoms in survivors of earthquake who had lost close family member or has been using psychiatric help after or before earthquake.

KEY WORDS: Earthquake, PTSD symptoms.

Pak J Med Sci October - December 2006 Vol. 22 No. 4 477-479

INTRODUCTION

Post Traumatic Stress Disorder (PTSD) is defined as a set of typical symptoms that develop after a person sees, is involved in, or hears of an extreme traumatic stressor. The person reacts to this experience with fear and hopelessness, persistently relives the event, and tries to avoid being reminded of it. The life prevalence of posttraumatic stress disorder is

estimated to be from 1-3 percent of the general population, although an additional 5-15% may experience subclinical forms of the disorder.¹⁻⁴

Iran is one of top ten countries that have earthquake as one of their main problem. During the past century, more than 160000 people have been killed due to earthquake in Iran.⁵ Bam earthquake in September 2003 was so severe that almost 100% of buildings and houses were destroyed and more than 40000 people were killed or injured. Research findings indicate that traumatic effect of natural disaster such as earthquake extend to survivors who have been confronted with risk of death, physical injuries and losing house wealth and relatives.³

These stresses may cause emotional and behavioral problems in some of them.⁶⁻⁸ PTSD is most likely to occur in those who are single, divorced, widowed, socially withdrawn, or of low socioeconomic level. The most important risk factors, however, for PTSD are severity, duration, and proximity of a persons' exposure

1. M. Yassini M.D
 2. Fr. Hosseini MD
- 1-2: Department of General Psychiatry,
Shahid Sadoughi University of Medical Sciences,
Yazd, IRAN.

Correspondences:

Dr. M. Yassini,
Shahid Sadoughi Medical Sciences University
Deputy for Research,
Building No.2, Bahonar Square,
P.O. Box: 734,
Yazd - IRAN.
E-Mail: yassiniard@yahoo.com

* Received for Publication: December 31, 2005

* Revision Accepted: June 2, 2006

to the actual trauma.¹⁻⁴ To assess the incidence and severity of PTSD symptoms in Bam earthquake survivors, we did a study on survivors who were referred to health services centers.

METHODS

This study was performed three month after earthquake. Two hundred twenty six persons who were referred to health services centers due to any reason were selected through simple random sampling method. Data was collected through a questionnaire that had 3 parts. The first part was related to demographic data. The second part pertained to physical injury secondary to earthquake, death of relatives in earthquake, personal and family history of psychiatric illness and the third part included eight- item derivative of SIP (Structured Interview for PTSD) Top 8 PTSD screening questionnaire.

Subjects were asked to complete the questionnaire through general practitioners in health service centers. Data was analyzed statistically with Chi-Square and ANOVA tests.

RESULTS

Among 226 respondents, 35.4% were male, 64.6% were female and 7.18 were widow. 62% had physical injury and 67.7% had a close family member who died in earthquake. Another 38.7% had a history of psychological problem and 42.8% had a positive family history of psychological problem before the earthquake while 18.6% had been using psychotropic medication before earthquake. Two hundred one (89.2%) of respondents had PTSD

symptoms, of which 34% had severe, 38% had moderate and 28% had mild PTSD symptoms.

DISCUSSION

The striking finding of this study was presence of PTSD symptoms in 89.2% of respondents, of which 72% had moderate to sever PTSD symptoms whereas a study on Birjand and Ardabil earthquake shows that 47.3% of children and 76.5% of adults had moderate to sever PTSD symptoms.⁵ And 3 months after chi-chi earthquake the rate of posttraumatic stress disorder was 11.3% and rate of partial PTSD was 32.0%.⁶ A study of 1027 earthquake survivors who were consecutively referred to a community center after a mean period of 14 months after the August 1999 earthquake in Turkey shows that 63% had PTSD.⁷ High rate of PTSD symptoms in our study may be due to doing our research in a health service center on the people who were seeking medical help.

There was no statistically significant relationship between PTSD symptoms and sex, socio economic status, education, occupation, physical injury and personal or family history of psychiatric illness, but the result of kilics' study on Novembers 1999 earthquake in Turkey shows that death of relatives and past psychiatric illness have been a predictive factors for depression.⁸

Livanou's study on treatment- seeking earthquake survivors in Turkey shows that the estimated rates of PTSD and major depression were 63% and 42% respectively.⁷ More severe PTSD symptoms related to greater fear during

Table-I: Severity of PTSD symptoms based on experiencing the death of a close family member

Death of a Close family member	Severity of PTSD symptoms				Total
	Normal n (%)	Mild n (%)	Moderate n (%)	Severe n (%)	
Yes	14 (9.3)	36 (24)	57 (38)	43 (28.7)	150
No	9 (12.7)	28 (39.4)	23 (32.4)	11 (15.5)	71
Total	23 (10.4)	64 (29)	80 (36.2)	54 (24.4)	221
p value	0.0027	0.009	0.210	0.017	

p value= 0.04

Table-II: Severity of PTSD symptoms based on using psychiatric help

Death of a Psychiatric Aid	Severity of PTSD symptoms				Total
	Normal n (%)	Mild n (%)	Moderate n (%)	Severe n (%)	
Yes	9 (10.7)	21 (25)	24 (28.6)	30 (35.7)	84
No	14 (10.4)	40 (29)	55 (41.0)	25 (18.7)	134
Total	23 (10.6)	61 (28)	79 (36.2)	55 (25.2)	218
p value	0.076	0.218	0.032	0.002	

p value= 0.03

the earthquake among female gender, those with lower education, loss of friend, and material loss. More severe depression symptoms were seen in female gender with lower educational level, loss of family member and past psychiatric illness.¹⁻⁸ HSU CC, Chong My's study on PTSD among adolescent earthquake victims in Taiwan shows that being physically injured and experiencing the death of a close family member with whom they had lived were the two major risk factors for PTSD.⁹ In our study findings are similar to other studies which show that there is statistically significant relationship between the incidence and severity of PTSD symptoms and loss of family member (Table-I) but physical injury, socio economic status, level of education had no effect on the incidence or severity of PTSD symptoms. Furthermore, incidence and severity of PTSD symptoms in survivors who were under psychiatric care after earthquake was statistically significant (Table-II).

REFERENCES

1. Kaplan & Sadock's Synopsis of Psychiatry, Williams and Wilkins, Baltimore, USA. 2003; 623-31.
2. Benjamin J Sadock. Virginia A Sadock. Comprehensive Textbook of Psychiatry Williams and Wilkins, Baltimore, USA 2000; P: 1448, 1463, 1484-1486.
3. David Nutt- Jonathan RT Davidson Joseph Zohar. Post Traumatic Stress Disorder. Taylor and Francis 2000; p 1-6,19-24.
4. Scott MJ, Palmer S. Stress Counselling Trauma and Post Traumatic Stress Disorder. Continuum Intl Pub Group.2000; 2-4.
5. Yassami MT, Psychiatric intervention in Bam earthquake survivors. Iran Psych Assoc J 2004; (1): 29-31.
6. Yang YK, Yehtl, Chen CC, Lee CK, Lee IH, Lee LC. Psychiatric morbidity and posttraumatic symptoms among earthquake victims in primary care clinic. Gen Hosp Psych 2003; 25(4): 253-61.
7. Livanou M, Basoglu M, Salcioglu E, Kalendar D. Traumatic stress responses in treatment- seeking earthquake survivors in Turkey. J Nerv Ment Dis 2002; 190(12): 816-23.
8. Killc C, Vsoj M. Psychological effects of the November 1999 earthquake In Turkey. Acta Psychiatry Scand 2003; 108(3): 232-8.
9. Hsu CC, Chong MJ, Yang P, Yen CF. Posttraumatic stress disorder among adolescent earthquake victims in Taiwan. J Am Acad Child Adolesc Psych 2002; (7): 875-81.