

## COMMUNITY PREVALENCE OF TRAUMA IN SOUTH ASIA - EXPERIENCE FROM KASHMIR

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Trauma is an inevitable part of human existence, especially in a conflict situation. This fact assumes even greater importance in the light of the fact that trauma could play a key role in the genesis of various psychiatric problems. With this impression a community based survey, assessing the prevalence of traumatic events, was undertaken in Kashmir province. The study was conducted in four districts of Kashmir province on adult subjects. The subjects were assessed using a checklist of 13 possible traumatic events, drawn from other major epidemiological studies. Evaluation yielded a lifetime prevalence of traumatic events of 58.69% (males = 59.51%, females = 57.39%), with firing and explosions being the commonest traumatic events encountered (81.37%). Importantly, the trauma exposure rates in males and females were similar, holding significance in view of a State of chronic conflict prevalent here. (JK-Practitioner 2006;13(Suppl I):S14-S17

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### Introduction

A substantial body of literature documents that individuals experience traumatic events far more commonly than previously believed. Epidemiological studies carried out in U.S.A. estimate that between 36-81% of general population experience a traumatic event at some times in their lives<sup>1,3</sup>. Other studies estimate a lifetime prevalence of traumatic exposure of 40-80% in adults<sup>1,4,5</sup>. In Australia, Rosenman found that 57% of general population sample of adults (18 years and older) reported a positive life history of experiencing one or more traumas<sup>6</sup>. The National Comorbidity Survey in America estimated the lifetime exposure to any trauma among men and women at 60.7% and 51.2% respectively<sup>3</sup>. Similarly, the Australian National Mental Health Survey reported the lifetime exposure to trauma among men and women at 64.6% and 49.5% respectively<sup>7</sup>.

Awareness of the role of psychological trauma in the causation of various psychiatric problems has waxed and waned throughout the history of psychiatry<sup>8</sup>. It has been known that pathological stress response syndromes can result from exposure to war, sexual assault and other types of trauma<sup>3</sup>. DSM III adopted the definition of traumatic event as "stressor that would be markedly distressing to almost anyone"<sup>9</sup>. Later on DSM IV added a further dimension by introducing the stressor criterion "the person experienced, witnessed or was confronted with an event that involved actual or threatened death or serious injury or a threat to the physical integrity of self or others" and "the person's response involved intense fear, helplessness or horror"<sup>10</sup>.

Traumatic events and the way people cope with them have a crucial role in development of Posttraumatic stress disorder (PTSD)<sup>3</sup>, major depressive disorder (MDD)<sup>11</sup>, generalized anxiety disorder (GAD)<sup>11</sup>, somatization<sup>12</sup>, and dissociative disorder<sup>12</sup>.

As a result of data provided by National Comorbidity Survey (Kessler et al, 1995)<sup>3</sup>, the Detroit Area Survey (Breslau et al)<sup>13</sup>, the National Women's Study (Resnick et al, 1993)<sup>5</sup>, and other large scale epidemiological studies in U.S.A.<sup>1,2,14</sup> and Australia (Creamer et al, 2001)<sup>15</sup>, knowledge of the prevalence of trauma and Posttraumatic stress disorder (PTSD) is now extensive from developed countries, especially U.S.A. and Australia. Despite the quality of work that has been conducted in recent years, our understanding of the epidemiology of trauma is not without limitations. Distinctly marked is the absence of international representatives in the research base as a whole<sup>16</sup>.

Only few epidemiological studies on trauma or PTSD in general populations have emerged from poor and economically developing countries<sup>17</sup>, although some recent research has begun to improve our understanding of trauma in poor, war torn countries<sup>18</sup>.

Wars, natural catastrophes and other disasters affect large population in different parts of the world. The exposure to the traumatic events is particularly high and rises manifold when the fight takes the form of guerrilla warfare, which extends for a long time. These man made disasters result in great loss of property and enormous death and destruction among the population. Data reveals that in the prevailing conflict situation over the past fifteen years in Kashmir, there has been a phenomenal increase in psychiatric morbidity, including stress related disorders<sup>19</sup>. Keeping in view all these facts the need to assess the occurrence and pattern of traumatic events, as contributory factors in the causation or precipitation of various psychiatric disorders including stress related disorders in the community, is of foremost importance. In keeping with the above-mentioned factors we conducted a study to find out the prevalence of traumatic events in the general

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population, in a chronic conflict situation from the developing world.

## Methods:

### Sample

The survey was carried out in four districts, comprising a population of 4197268 individuals, in Kashmir valley of Jammu & Kashmir State (India). A total of ten villages from each district were taken for the study, with appropriate urban area representation. The areas have been delineated as per the latest census report of 2001<sup>20</sup>. All the individuals included in the study were above 18 years of age. A sample of 300 individuals from each district with a total of 1200 were selected. The study was carried out from March 2004 to September 2005.

### Data Collection Procedure:

- Working Team: It comprised of a team of trained/trainee psychiatrists led by the first author.
- Area Selection: The working team identified the geographical areas for carrying out the survey. This survey was carried out in four districts of Kashmir valley namely Srinagar, Anantnag, Baramulla and Pulwama. Areas were delineated as per the latest census report 2001<sup>20</sup>. A total of ten villages from each district were taken with appropriate urban area representation.
- Population: All the individuals included in the study were more than 18 years of age. Permanent residents of the area domicile for more than 2 years were taken; temporary visitors to the area were excluded.
- Instruments: Respondents were asked 13 possible traumatic events drawn from other major epidemiological studies. These were designed to include events commonly reported in most populations and to be consistent with stressors identified in the revised edition and the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM III – R and DSM IV)<sup>3,21</sup>. In each case of traumatic event we asked if the trauma had happened, was witnessed, learned about, not sure, or does not apply, to the subjects interviewed and only those events were taken which had been severe in intensity, as per DSM IV laid down criteria. The 13 events asked for were: (i) Natural Disasters (e.g. floods, earthquake, landslide, avalanche, snowstorm etc.) (ii) Fire or Explosion (iii) Transportation Accident (e.g. motor vehicle accident, boat accident, plane crash etc.) (iv) Serious Accident other than transport (e.g. accident at work place, recreational activity etc.) (v) Exposure to toxic substances (vi) Physical assault (e.g. being short, stabbed, threatened with knife, gun etc.) (vii) Sexual Assault (e.g. rape, attempted rape, made to perform any type of sexual act through force or threat or harm) (viii) Other unwanted or uncomfortable sexual experience (ix) Combat or exposure to war zone (e.g. in military or as civilian) (x) Life threatening illness or injury (xi) Severe human suffering (xii) Sudden violent death (e.g. homicide, suicide) (xiii) Sudden unexpected death of someone close.

## Results:

### Sample:

A total number of 1200 people were selected for the study, but only 671 consented to participate and included 61.84% (n=415) males and 38.15% (n=256) were female.

### Mean age

Mean age for the whole sample was 38.28 years (n=671) while as it was 37.93 years for males and 38.84 years for females.

### Prevalence of Trauma

The total lifetime prevalence for any traumatic experience was 58.69%. It was 59.51% in males and 57.39% in females.

**Table 1**

Gender	Number of subjects	% of subjects	Mean Age	Prevalence of Trauma (%)
MALE	415	61.84	37.93	59.51
FEMALE	256	38.15	38.84	57.39
<b>Total</b>	<b>671</b>	<b>100</b>	<b>38.28</b>	<b>58.69%</b>

### Prevalence of different Traumatic events:

The highest prevalence for any traumatic event (table 2), was for fire or explosion 81.37%, accounting for 82.4% in males and 79.68% in females. Following this the next most common traumatic event was combat or exposure to war zone, which was 73.23%, accounting to 75.18% in males and 70.31% in females. The lifetime prevalence for exposure to natural disaster for males was 15.80% and 14.01% in females with an overall prevalence of 13.56%. Least common type of trauma reported was sexual assault in males i.e. 6.5% while as it was 12.1% in females and 8.64% overall. Other unwanted or uncomfortable sexual experience accounted for 6.26% in males and 10.93% in females with total prevalence of 8.04%.

**Table 2**

TRAUMA	MALE (%)	FEMALE (%)	TOTAL (%)
Combat or Exposure To War Zone	75.18	70.31	73.32
Firing or Explosions	82.4	79.68	81.37
Life threatening Injury or Illness	40.72	35.93	38.89
Natural Disasters (eg Landslide, Avalanche, Snowstorm, Earthquake)	15.8	14.01	13.56
Physical Assault (eg being shot, stabbed, threatened)	53.97	32.42	51.71
Serious Accidents, Other Than Transport	22.16	15.23	19.52
Severe Human Suffering	41.92	33.59	40.08
Sexual Assault (eg rape, attempted rape, etc)	6.5	12.1	8.64
Other Unwanted or Uncomfortable Sexual Experiences	6.26	10.93	8.04
Sudden Death of Someone else Close to You	45.3	35.54	54.11
Sudden Violent Death (suicide/homicide)	24.46	28.12	27.17
Transport Accidents	39.27	15.23	30.1
Exposure To Toxic Substances	13.97	5.85	10.87

## Discussion:

Our study provides the first community-based estimates of trauma exposure in South Asia based on the experience of trauma exposure in a sample of 617 subjects from four districts of Kashmir valley, representing both urban and rural areas. This study revealed very high prevalence of

trauma exposure in general population. Half of the selected subjects opted out of the study due to prevailing socio-political reasons, who if included might have projected even higher rates.

Lifetime prevalence for any traumatic experience was 59.51% in males and 57.39% in females, with the prevalence only about 2% more in males than females. In contrast with the findings by Kessler et al 1995 from National Co morbidity Survey, where it was 60.7% for Men and 51.2% for women<sup>3</sup>. The types of trauma experienced by the largest proportion of people was firing or explosion (82.4% in men and 79.68% in women) followed by exposure to combat or war zone (75.18% in men and 70.31% in women). These two types of trauma formed the largest group of traumatic events experienced by the people. As the number of males and females exposed to trauma are equal this may explain the reason for almost similar lifetime prevalence of any traumatic event in both males and females, which is explained by the fact that the study has been conducted in a chronic conflict area, with mass trauma exposure of the whole community, in contrast to the sample of National Co morbidity Survey<sup>3</sup> which was done in a population where this type of trauma was almost absent.

A significantly higher proportion of men than women reported experiencing events like transportation accidents (males 39.27% and females 15.23%), other serious

accidents (22.16% in males and 15.23% in females) and physical assault like being shot, stabbed or threatened (53.97% in males and 32.42% in females).

A significantly higher proportion of females reported experiencing sexual assault (12.1% in females and 6.5% in males) and other unwanted sexual experience (10.93% in females and 6.26% in males) which may still be an under representation of such events, because of under reporting due to socio-cultural factors<sup>22</sup>. The prevalence of exposure to disaster is almost equal in both males and females (15.80% in males and 14.01% in females) which is in accordance with the findings of Norris 1992 who found lifetime exposure to disaster of 13%<sup>2</sup>.

Commonly, studies have revealed that while trauma is a common experience, the development of posttraumatic stress disorder is not<sup>10</sup>. The lifetime prevalence of PTSD in National Co morbidity Survey (Kessler et al 1995)<sup>3</sup> was 7.8% where as our study revealed a lifetime prevalence of 15.9% PTSD in community<sup>23</sup>. This may be due to the fact that our study has been conducted in a conflict area in contrast to Norris et al and Kessler et al, who conducted studies in peace zone prior to September 11, 2001. A study by Somasundaram 1994 in Sri Lanka, another chronic conflict zone, found 27% prevalence of PTSD, but he assessed people only exposed to combat which might be a confounding factor<sup>24</sup>.

#### References:

1. Breslau N, Davis G, Andreski P, et al: Traumatic events and posttraumatic stress disorder in an urban population of young adults. *Archives of General Psychiatry* 48:216-222, 1991.
2. Norris FH: Epidemiology of trauma: frequency and impact of different potentially traumatic events on different demographic groups. *Journal of Consulting and Clinical Psychology* 60:409-418, 1992.
3. Kessler RC, Sonnega A, Bromet E, et al: Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry* 52:1048-1060, 1995.
4. Breslau N, Davis GC, Andreski P, et al. Sex differences in posttraumatic stress disorder. *Arch Gen Psychiatry* 1997; 54:1044-1048.
5. Resnick HS, Kilpatrick DG, Dansky BS, et al. Prevalence of civilian trauma and posttraumatic stress disorder in a representative national sample of women. *J Consult Clin Psychol* 1993; 61:984-991.
6. Rosenman S; Trauma and posttraumatic stress disorder in Australia: findings in the population sample of the Australian National Survey of Mental Health and Wellbeing; *Aust N Z J Psychiatry* 2002; 36:515-520.
7. Andrews G, Henderson S, Hall W. Prevalence, comorbidity, disability and service utilization. *Br J Psychol*. 2001; 178:145-153.
8. Van Der Kolk B.A. Lars Weisaeth, Onno Van Der Hat; History of trauma in psychiatry: traumatic stress pp. 44, The Guilford Press, 1996.
9. American Psychiatric Association, Diagnostic and Statistical Manual of Mental Disorders third edition, Washington DC, American Psychiatric Association 1980.
10. American Psychiatric Association, Diagnostic and Statistical manual and mental disorders, fourth edition, Washington DC, American Psychiatric Association 1994.
11. Kendler K.S., Haltema Jom, Butera F, Gardner C.O., Prescott A.C. 2003, Life event dimension of loss, humiliation, entrapment and danger in the prediction of onset of major depression & generalized anxiety. *Archives of General Psychiatry*. Aug. 2003, vol. 60, p 789-796.
12. Stein Dan J, Hollander E, 2002 text book of anxiety disorder, the American Psychiatric Publishing, Washington DC. p 360-365.
13. Breslau N, Kessler RC, Chilcoat HD, Schultz LR, Davis GC, Andreski P. Trauma and posttraumatic stress disorder in the community: the 1995 Detroit Area Survey of Trauma. *Arch Gen Psychiatry*. 1998; 55:626-670.
14. Stein, M., Walker, J., Hazen, A., & Forde, D. (1997). Full and partial posttraumatic stress disorder. Findings from a community survey. *American Journal of Psychiatry*, 154, 1114-1119.
15. Creamer, M., Burgess, P., & McFarlane, A. (2001). Posttraumatic stress disorder: Findings from the Australian National Survey of Mental Health and Well-Being. *Psychological Medicine*, 31, 1237-1247.
16. Norris F. H., Murphy, D., Babu C.K., Perilla J.L., 2002. Epidemiology of trauma & PTSD in Mexico. *Journal of Abnormal Psychology*, 2003, Vol. 122 No. 4, p. 646-656.
17. De Girolamo, G., & McFarlane, A. (1996). The epidemiology of PTSD: A comprehensive review of the international literature. IN A. Marsella, M.

18. Friedman, E, Gerrity. & R. Surfield (Eds.), Ethnocultural aspects of posttraumatic stress disorders: Issues, research and clinical applications (pp. 33-86). Washington DC: American Psychological Association.
19. DeJong, J., Komproe, I., Van Ommeren. M., El Masri, M., Araya, M., Khaled, N., et al, (2001). Lifetime events and posttraumatic stress disorder in post-conflict settings. *Journal of the American Medical Association*, 286, 555-562.
20. Margoob M.A. A study of present magnitude of psychiatric disorders and the existing treatment services in Kashmir (1990-1994). *JK Practitioner* 1995;2(3):165-168.
21. Census of India 2001, series-2, Jammu & Kashmir Government paper-3 of 2001. Director of census operations India.
22. Kessler RC, McGonagle KA, Khao S, et al. Lifetime and 12-months prevalence of DSM-III-R disorders in the United States. *Arch Gen Psychiatry*. 1994; 51:8-19.
23. Firdosi M.M., Margoob M.A. Varying clinical presentation in victims of sexual traumatization. *JK Practitioner*, Vol. 13, Suppl. 1, S73-S78 2006.
24. Margoob M.A., Shiekh Ajaz A. Community prevalence of adult PTSD in South Asia- experience from Kashmir. *JK Practitioner*, Vol. 13, Suppl. 1, S28-S25 2006.
25. Somasundaram, D.J. and Sivayokan. War Trauma in Civilian Population, *BJP*.1994: 165:524-527.