

Posttraumatic Stress Disorder following Sociopolitical Disaster in Nandigram, West Bengal, India: Comparison between Younger and Older Group of Women

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ABSTRACT

Introduction: The present study purported to examine the posttraumatic stress disorder (PTSD) following the sociopolitical disaster of attempted eviction of residents of Nandigram, West Bengal, India, in 2007. The study compared the prevalence of PTSD in the younger group (YG) and older group (OG) of women in a selected sample, so that appropriate psychosocial intervention strategies could be formulated in future. Data were collected from 254 women, YG = 135, OG = 119, 1 month after exposure to trauma and from 247 women, YG = 130, OG = 117, 6 months after the trauma. A General Information Schedule (GIS) and Impact of Events Scale (IES) were administered. The mean values, standard deviations (SD) of each group were calculated for scores on IES. Student's t-test was used to calculate the significant difference between YG and OG; 1 month after the incident 59.06% revealed PTSD of moderate degree. The YG had significantly higher prevalence as compared with the OG. After 6 months, there was still a prevalence of 49.80%; however, the YG showed noteworthy improvement, whereas there was no noticeable difference in the OG. The findings indicate that exposure to traumatic event does lead to the vulnerability for development of PTSD in women, and there exists significant age difference in coping with trauma over time.

Keywords: Older group, Posttraumatic stress disorder, Prevalence rate, Sociopolitical disaster, Trauma, Younger group.

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INTRODUCTION

Survival of any kind of trauma or disaster, including war, riot, genocide, rape, etc., depletes an individual's normal coping, leading to stress and a constellation of symptoms which is now called as "PTSD." That physical stresses and

injuries can lead to long-lasting emotional disturbance and damage is a relatively recent realization. Many of the soldiers returning from the trenches of World War I were described as "shell shocked," which now would be described as suffering from PTSD.

It was not until the 1980s version of the Diagnostic and Statistical Manual published by the American Psychiatric Association that PTSD first entered the diagnostic nomenclature. This was a landmark development in that it implied that those debilitated by trauma were not simply "weak" but that the nature of the event had been taken seriously into account.¹

Disasters have in common a collective social suffering that can lead to the onset of a range of adverse mental health outcomes, including serious posttraumatic psychopathologies. According to the Diagnostic and Statistical Manual of Mental Disorders, fifth edition (DSM-5),² PTSD is a syndrome that develops after a person sees, is involved in, or hears of an extreme traumatic stressor. The person reacts to this experience with fear and helplessness. The three most prominent symptoms of PTSD are:

- Persistent reexperiencing (intrusive thoughts) of the traumatic event;
- Persistent avoidance of stimuli associated with the trauma or numbing of general responsiveness;
- Marked alterations in arousal and reactivity (symptoms not present before the trauma) as evidenced by the following: (a) hypervigilance, (b) irritableness, (c) sleep disturbance;
- Persistent anhedonic or dysphoric mood states and cognitions.

To make the diagnosis, the symptoms must last for more than a month after the event and must significantly affect important areas of life, such as family and work.²

Disaster and its consequent trauma are of two kinds: (i) natural disasters (flood, earthquake, etc.) (ii) and man-made (like, war, riot, rape, etc.). Studies³ indicate that impairment associated with man-made disaster, especially violence, is severe as compared with natural disasters and might lead to permanent emotional damage.

In December 2006, the government of West Bengal had given notice to the residents of Nandigram (East

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Midnapore) that 34,000 acres of land would be acquired by the government to set up a chemical hub by the Salem Group of Indonesia. Nandigram had already been categorized under the Special Economic Zone. Nandigram comprises 38 villages in the East Midnapore district of West Bengal, India. The above plan by the state government led to the eviction of 70,000 people from their homes.⁴

It resulted not only in physical and material loss but also in the destruction of the social fabric of the region. A section of residents of Nandigram refused to comply with the government diktat and part with their land as they felt that:

- The compensation package offered was not up to the land holders' satisfaction.
- They were afraid of losing their traditional livelihood, mainly, of farming.
- They were insecure about losing their established social mooring.

Consequently, on March 14, 2007 the state government with the help of police and some villagers who supported the government plan tried to forcefully evict the owners and procure their land. As there was stiff resistance on the part of the landowners, police opened fire on the villagers killing 14 people, which included 2 women.

There were reported killings and injuring many, raping and brutalizing of women, vandalizing and property destruction on a large scale. Following this, the villagers initially ran away and hid in the nearby woods but finally they united and allegedly helped by some political groups fought back to drive out the opponents.

One very significant point to be noted was the strategy of resistance. Young women and children occupied the front ranks: A protest tactic from colonial days when the police would usually desist from firing upon unarmed women and children.⁵ However, in this instance, police and the civilian supporters did not desist from firing. The maximum brunt of the attack was borne by women, who were not only physically injured and killed but were sexually assaulted.

The relief workers who went after the disaster felt that the situation could be categorized as man-made disaster and majority of the victimized villagers (especially women) were in a traumatized mental state. Many were in a vulnerable state to develop PTSD. However, it remained to be established if PTSD had actually developed in all traumatized individuals. Indeed, research by Dudek and Koniarc⁶ and Vogt⁷ has shown that exposure to trauma is necessary but does not always lead to PTSD. Therefore, one purpose of the present research was to examine whether diagnosable PTSD had developed in the selected sample.

Most early research on trauma and PTSD focused on male samples. The majority of these studies examined factors related to how male combat veterans responded to war-related trauma. During the war in Bosnia and Herzegovina, a study by Savjak⁸ showed 42% risk of PTSD among the displaced population in comparison to 26.7% for domiciled persons exposed to similar war traumas. Around the same time, researchers who studied women's experiences of sexual assault identified a syndrome that was similar to that experienced by combat-exposed men. Estimates from community studies by Kessler et al⁹ and Pyari et al¹⁰ suggest that women experience PTSD at more than twice the rate that men do. Not much data are available regarding prevalence of PTSD among women in India. There are only some brief studies following Latur (1993) and Bhuj (2001) earthquakes¹¹⁻¹³ and also after Gujarat riot in 2002.¹⁴ The studies reported symptoms described as characteristic of PTSD.¹⁵ Of potentially traumatic events for women, exposure to rape carries one of the highest risks for PTSD.^{7,16}

Considering all the above issues, this article aims at studying the prevalence of PTSD among the traumatized women of Nandigram and also to find out whether there is any difference in the prevalence rate as well as severity of PTSD between the YG of women as compared with the older women. Such an attempt will not only help in shedding light on the prevalence of PTSD in the Indian scenario but also will help in formulation of therapeutic modules to help such affected individuals in coping better with their stress.

MATERIALS AND METHODS

Subjects

Data were collected from women of five different villages of Nandigram, West Bengal, India, namely, Khejuri, Sonachura, Adhikaripara, Satengabari, and Gokulnagar. These five villages were among the most affected ones of the area. The participants' age ranged from 20 to 59 years. They were divided into two groups:

1. The YG with age ranging between 20 and 39 years.
2. The OG with age ranging between 40 and 59 years.

One month after the event (March 14, 2007), data were collected from a total of 254 women, 135 in the YG, 119 in the OG.

The same procedure was repeated 6 months after the event. Data were collected from 247 (of the original 254) women with 130 in the YG and 117 in the OG (others having mostly shifted to safer places).

Sample was selected based on the following.

Inclusion Criterion

- Women between the age group of 20 and 59 years.

- All the subjects had experienced trauma themselves or in their family members or witnessed the traumatic incident on others (physical, sexual violence, or destruction of property).

Exclusion Criterion

- Women were screened by initial interview to rule out the presence of any pre-morbid, serious psychological disorder.

Tools used: For the present study the investigator used:

- GIS developed for this specific purpose.
- IES,¹⁷ a 15-item questionnaire evaluating the presence or intensity of posttraumatic phenomena. (split-half reliability 0.86).

Procedure

The present study was part of a community-based survey and psychosocial intervention program initiated by the National Commission for Women (NCW), Government of India, to assess the situation of alleged atrocities on March 14, 2007. The visiting team from NCW requested for some mental health professionals to accompany them. The first author was a part of that study.

Permission was also taken from the local officials and informed consent was taken from the participants.

Only subjects who were willing to take part in the study were included after explaining the nature of the

study. Then proper rapport was established before starting the procedure.

The subjects were given GIS to acquire the essential and demographic information about them. They were then administered the IES.

Both the scales were administered individually and orally by the interviewer as most of the women did not have the literacy for self-administering the scales. This was done 1 month after the traumatic incident. The IES was again administered 6 months after the event on almost all the subjects, i.e., those who participated in the survey. Data for IES were scored following the prescribed scoring procedure.

Analyses included descriptive statistics like mean, SD and t-test to determine the significance of difference in the mean score between the YG and OG after 1 and 6 months of the event.

RESULTS

The results of the study are reported in Tables 1 to 3. Data could be collected from a total of 254 women after 1 month of the incident. Of these 135 were in the YG (mean age = 32.37 ± 27.09 years), 113 were in the OG (mean age = 50.15 ± 28.74 years).

After 6 months data could be collected from 247 individuals, Seven respondents had migrated to safer places. Of these 130 were in the YG (mean age = 30.7 ± 27.24 years), 117 were in the OG (mean age = 50.20 ± 28.86 years).

Table 1: Sociodemographic details and the nature of trauma in each group from GIS

	Young group (20–39 years)				Old group (40–59 years)			
	After 1 month		After 6 months		After 1 month		After 6 months	
	n	%	n	%	n	%	n	%
<i>Marital status</i>								
Single	3	2.22	1	0.77	–	–	–	–
Married	127	94.07	125	96.15	111	93.28	109	93.16
Widow	5	3.7	4	3.08	8	6.72	8	6.84
<i>Religion</i>								
Hindu	103	76.29	100	76.92	101	84.87	99	84.62
Muslim	32	23.7	30	23.08	18	15.13	18	15.39
<i>Occupation</i>								
Homemaker	135	100	130	100	61	51.26	60	51.28
Retired	–	–	–	–	58	48.74	57	48.72
<i>Education</i>								
Up to class X	133	98.52	129	99.23	119	100	117	100
<Class X	2	1.48	1	0.77	–	–	–	–
<i>Nature of trauma</i>								
Physical assault/injury	82	60.74	80	61.54	77	64.71	77	65.81
Sexual assault	68	50.37	65	50	22	18.49	21	17.95
Assault/injury to family member	90	66.67	89	68.46	69	57.98	68	58.12
Loss of family member/missing	23	17.04	11	8.46	14	11.77	8	6.84
Death of family member	3	2.22	2	2.31	1	0.8	1	0.86
Material loss (house and property)	120	88.89	119	91.54	75	63.03	74	63.25
Heard or seen others (assaulted/injured)	135	100	130	100	119	100	117	100

Table 2: Number and percentage of PTSD detected in each group

After 1 month		Total of YG and OG after 1 month (n = 254)				After 6 months				Total of YG and OG after 6 months (n = 247)	
YG (n = 135)		OG (n = 119)				YG (n = 130)		OG (n = 117)			
PTSD											
n	%	n	%	n	%	n	%	n	%	n	%
84	56	66	44	150	59.06	65	52.85	58	47.15	123	49.80

Table 3: Comparison of mean scores of IES across 1st and 6th months assessment between the YG and OG

IES	Young group mean \pm SD	Old group mean \pm SD	t-value	df	p-value
1st month	41.13 \pm 4.82 (n = 84)	36.95 \pm 4.94 (n = 66)	5.23	148	0.001***
6th month	36.24 \pm 6.48 (n = 65)	36.21 \pm 5.86 (n = 58)	0.03	121	0.064

*p \leq 0.05; **p \leq 0.01; ***p \leq 0.001

As is evident from Table 2, data taken 1 month after the event show 59.06% (150 of the total 254 respondents) revealed evidence of PTSD on IES.

It also shows that 1 month after the incident, YG had higher prevalence with 56% (84 out of 150 individuals) revealing symptoms of PTSD of moderate degree with a mean score of 41.13 (\pm 4.82) (Table 3). Prevalence in OG was 44% (66 out of 150 individuals) also of moderate degree with a mean score of 36.95 (\pm 4.94) (Table 3).

Table 3 shows that there is significant difference of impact of events between the means of YG with a mean score of 41.13 (\pm 4.82) and OG with a mean score of 36.95 (\pm 4.94), both scores were in the "moderate" degree in 1st month but there is no significant difference between the 6th month's score where YG with a mean score of 36.24 (\pm 6.48) has recovered more than OG with a mean score of 36.21 (\pm 5.86), also in the "moderate" degree.

A t-value of 5.23 indicates presence of true difference in the rate of prevalence of PTSD between the two groups after 1 month.

After 6 months, 49.80% (123 out of 247 individuals) still revealed PTSD. Although there is a 10% reduction after 6 months, it is significantly high.

A noteworthy and curious change noticed is a significant reduction of symptoms in the YG with 52.85% (65 out of 123 individuals) with a mean score of 36.24 (moderate degree) after 6 months from 41.13 after 1 month, whereas there was no significant difference in the OG with 47.15% (58 out of 123 individuals) prevalence and a mean score of 36.21 (moderate degree) after 6 months from a mean score of 36.95 after 1 month.

A t-value of 0.03 indicates that there is no significant difference between the two groups in the prevalence of PTSD after 6 months of the incident.

DISCUSSION

It can be said that 59.06% were suffering from PTSD (following DSM-5 classification)² as: (i) Their symptoms developed after exposure to trauma, and (ii) they did

not have any significant, premorbid psychiatric disorder (other comorbid conditions are not considered in this study). This finding is commensurate with the figure of 5 to 75% lifetime prevalence according to Kaplan and Sadock.¹⁸ What is noteworthy is the difference in the prevalence between the two groups, with the YG manifesting significantly higher rate of PTSD as compared with the OG. This confirms the finding by Magruder et al¹⁹ which found that younger people reported more severe symptoms. The answer may lie in the fact that susceptibility to PTSD may, at least, be partially related to the fact that younger women are more likely to experience sexual assault. Of potentially traumatic events, exposure to rape carries one of the highest risks for PTSD.^{7,16} As is evident from Table 1, YG experienced more sexual assault compared with OG, which might explain the higher prevalence in YG.

It contradicts the report of Ditlevsen and Elklit²⁰ that PTSD rates tend to drop as individuals get older. The result of the current study is consistent with the finding that younger people reported better growth and coping than older people following PTSD by Powell et al.²¹ It also confirms the finding by Kar¹¹ which put elderly individuals more at risk.

However, even 6 months after the incident, the degree of trauma remained in the moderate degree (36.23) possibly because the ongoing sociopolitical turmoil and unrest had not stopped. They continued to be retraumatized for want of basic physical needs like proper shelter or security, medical care, inadequate relief and rehabilitation provisions, and underdeveloped infrastructure leading to delayed and inadequate postdisaster interventions making them even more vulnerable.¹⁵

So it is evident from the study that exposure to traumatic events leads to the possibility of developing PTSD significantly. That PTSD is a relevant clinical construct in Indian context is also supported by recent studies with women survivors of Gujarat riot (2005) and Latur earthquake survivors where a prevalence of 74% was reported by the Journal of IMA.¹¹

The results are consistent with other findings which show that displacement with its "traumatogenic effect" carries 42% risk of developing PTSD⁸ and it is intense and enduring in victims exposed to extreme violence even 3 years after the initial study.⁸

What is noteworthy is the significant reduction of symptoms in the YG 6 months after the incident, whereas there is no such change in the OG.

The explanation of this finding, and controversy if any, lies in the specificity of the situation of this incident. On detailed interview, certain facts emerged to explain this result:

- The initial impact of the event was extensive on YG (the reason explained earlier) but as evident from Table 1, almost all were homemakers, so they had to get engaged with the business of daily household chores, looking after children and family, which had a therapeutic effect of distraction from brooding on the events and thereby helping to attenuate the stressful effect.
 - The opposite holds true for the OG, i.e., a large percentage of women in this group, although homemakers, were actually leading a semi-retired life with grown-up children, and daughters-in-law who had the responsibility of looking after the household. So, they did not have much to distract themselves from the constant brooding.
- Many of the women in the YG were planning to shift and relocate themselves to other places with their husbands and family. Their husbands were of the age group where they could think of a relocation, also to consider a change of their profession. So they had something to look forward to make new plans in life. Members of the OG were too old to take this step, their husbands were over 60 years of age when no new beginning was possible. So the future appeared bleak and insecure.

LIMITATIONS

Some limitations of the study need to be mentioned:

- It would have been more informative and conclusive if men could have been included. But most men were in hiding during daytime, so they were not available to be included in the study.
- IES-R should have been used instead of IES which does not include items relating to hyperarousal. However, the urgency and emergency of the situation forced the researcher to depend on the then available test.
- The situation in which the study was conducted was far from clinical, often in open courtyards, or under trees in fields, with volatile situation in the background with possible immediate retaliation from existing aggressors.

CONCLUSION

The PTSD is a relevant clinical construct in the Indian context, especially among women. This needs to be considered for formulation of any future disaster management programs, given the fact that India is a disaster-prone country.

IMPLICATIONS

Despite all these limitations, certain important implications which have emerged from this study are: That women are very much vulnerable to PTSD following trauma as also reported by Kessler et al⁹ and Pyari et al,¹⁰ especially women of older age group. This must be kept in mind in formulating policies on disaster preparedness and disaster management, when there is need of gender-specific, psychosocial interventions.

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