

## RESEARCH

# Impact of tsunami disaster among children

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## Abstract

**Background:** The violent tsunami waves have brought about tremendous loss to life and properties of the people, particularly to the fishermen folk in the areas of Tamil Nadu, Andhra Pradesh and Kerala. It was seen that the impact of tsunami on the children was incredible, subsequent to the disaster. Therefore, it was felt that the extent of the impact must be unearthed before initiating any intervention.

**Materials and methods:** The current study attempted to find out the impact of tsunami on the children. It was done during the months of May – July, 2005 at Little Flower High School, Melmanakudy, Kanniyakumari. Through survey method 238 children from the classes sixth to tenth standard were enumerated for the study. The tools used were (1) A background proforma to profile the sociodemographic details of the children and (2) Impact of Event Scale (Child Version).

**Results:** The age of the respondents ranged from ten to 18 years. The children suffered from multiple losses. Intrusion and avoidance was equally present among the children.

**Conclusion:** The impact of disaster on children is substantial. Mental health professionals have a crucial role to play in assessing, planning and systematically implementing psycho-social intervention and follow up services.

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## Introduction

The frequencies as well as intensity of natural disasters are increasing globally and in India.[1] On December 26, 2004, the nation stood shocked when the violent waves of tsunami engulfed many places in the coastal areas of Tamil Nadu, Andhra Pradesh and Kerala. It brought about tremendous harm to life and properties of the people, particularly to the fishermen folk in these areas. Irrespective of the age, it was seen that the impact of tsunami on the children was incredible. Therefore it was felt that the extent of the impact must be unearthed at the onset before initiating any mental health intervention. This information could also be used in future to track down the changes in the intervened group during or at the end of a disaster intervention programme.

The impact of the disaster has always been a topic for research all over the world. In India, National Institute of Mental Health and Neurosciences (NIMHANS) has been at the forefront studying the psychological consequences of disasters and interventions systematically.[2,3] In the recent years researchers are taking keen interest in studying influence of disasters on the children. Psychological trauma is often described as one or a series of 'blows' that have the effect of '...rendering the young person temporarily helpless and breaking past ordinary coping and defensive operations'.[4] Four universal characteristics of children's psychological responses to

trauma are: (a) visualised/repeatedly perceived memories; (b) repetitive behaviours; (c) trauma-specific fears; and (d) changed attitudes about people, life and the future.[4]

Children and adolescents are more vulnerable to disaster related psychiatric manifestations.[5] A study assessing the respective impact of traumatism exposure in an industrial disaster using Impact of Events Scale (IES) found that the children exposed to the disaster showed significantly higher anxiety and trauma-related scores than the control group.[6] The younger exposed children exhibited the highest psychopathological scores and there were no differences on questionnaire scores between girls and boys.

In another study in Japan,[7] conducted to investigate the nature of the recovery processes and psychological reactions of children and adolescents affected by the Great Hanshin Awaji Earthquake, it was found that girls were more heavily affected and they need more time to recover from trauma than boys. In yet another study in the aftermath of 2004 South East Asian tsunami it was found that 51% of the children are moderately affected and 33% are severely affected by the psychological distress.[8]

## Methodology

The study attempted to find out the impact of tsunami on the children. The universe of the study was Little Flower High School, Melmanakudy, Kanniyakumari

District, Tamil Nadu. Melmanakudy is a severely affected village in tsunami and almost all the children of the school under study were from the fishermen community. All the 238 children from sixth standard to tenth standard were enumerated for the study. The exercise was done during the months of May – July, 2005 using the survey method. The following instruments were used to collect the data:

1. A background proforma (Tamil) to profile the socio-demographic details.
2. IES (Child Version)[9] to appreciate the impact on the disaster on the children (Tamil version).

## Results

### *Background details of the children* (Table 1)

The age of the respondents ranged from ten to 18 years. Among the respondents majority (81.9%) of the children belong to the age group ten to 14 years. Among the children, 68.5% were girls and the remaining 31.5% were boys. A meagre 0.8% was only Hindus while the rest were Christians. Children from joint families were slightly more in number (51.7%) while 48.3% of the children were from nuclear families. It was found that 64.7% of the children had witnessed tsunami.

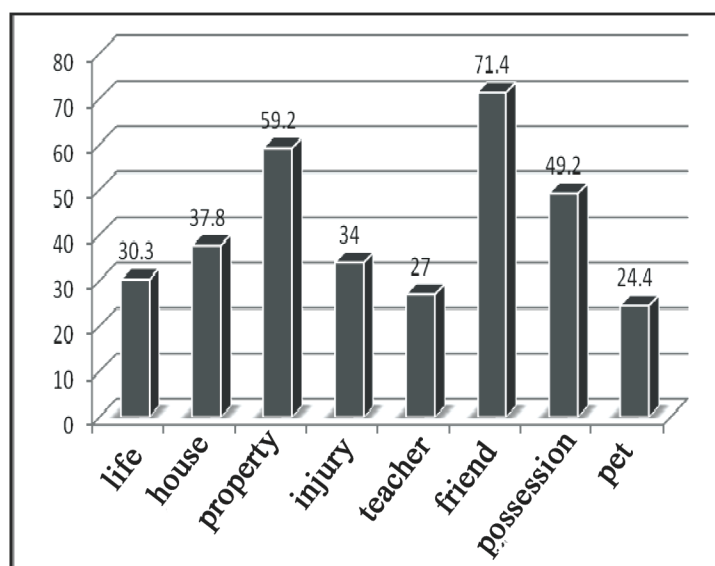
**Table 1. The background information of the children (N=238)**

VARIABLE	CATEGORY	Number (N)	Percentage (%)
<b>Age (in yrs)</b>	10-14	195	81.9
	15-18	43	18.1
<b>Gender</b>	Male	75	31.5
	Female	163	68.5
<b>Religion</b>	Hindu	2	0.8
	Christian	236	99.2
<b>Class of study</b>	6-8	149	62.6
	9-11	89	37.4
<b>Family type</b>	Joint	123	51.7
	Nuclear	115	48.3

### *Type of loss*

The children suffered from multiple losses. Hence the same person has been counted under different categories of losses under study. It could be seen that 30.3% children under study had to bear the life loss, 37.8% children lost their house, 59.2% of the children suffered loss of their property and on 34% children tsunami had inflicted some form of injuries. It was also seen that 27% of the children reported loss of their teacher

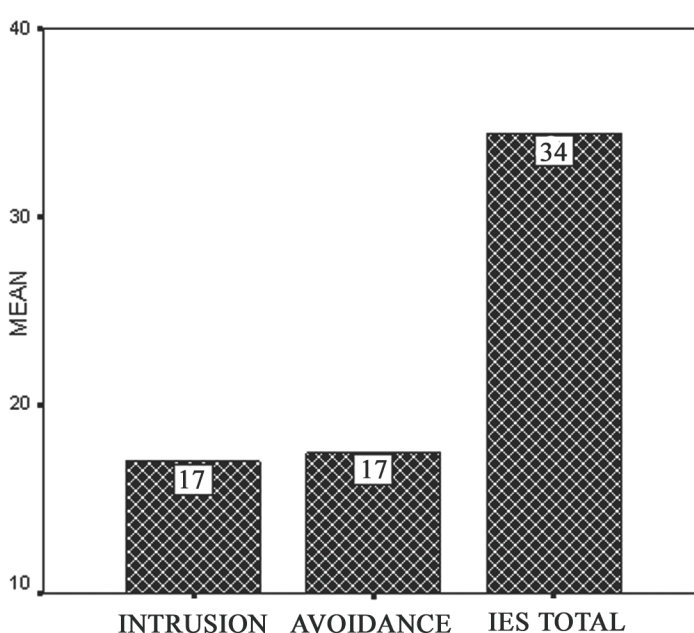
in tsunami. Another 71.4% reported loss of their friend, while 49.2% and 24.4% of children reported loss of their possessions and pets respectively (Figure 1).



**Figure 1** Type of loss.

### *Impact on the children*

In the subscales of IES, the mean scores for intrusion as well as avoidance were same (i.e. 17) (Figure 2). It indicates that in the sampled population (children) the intrusion and avoidance symptoms were equally present. Age-wise analysis showed more intrusion and the avoidance symptoms in the age group ten to 14 years than 15-18 years. Similarly, gender-wise analysis showed more impact in girls (mean IES score, 35) than in boys (mean IES score, 32).



**Figure 2** IES scores. (IES=Impact of Events Scale)

### ***Clinical status of the respondents*** (Table 2)

Analysis shows that a little more than half (55%) of the children falls in the moderate category i.e. the impact of tsunami on this population was moderate. Severe impact was reported in 24% children.

**Table 2. IES clinical status**

CLINICAL STATUS	Number (N)	Percentage (%)
<b>Sub clinical</b>	14	6
<b>Mild</b>	37	15
<b>Moderate</b>	130	55
<b>Severe</b>	57	24

IES=Impact of Events Scale

### **Discussion**

Tsunami was a catastrophe that resulted in wide loss to life and property. The present study attempted to unearth the impact of tsunami on the children. The children had suffered multiple losses in terms of life, property, house, possession, pets, etc. It was also found that tsunami has left its impact on children of all age group though it was seen more among those belonging to late childhood and early adolescent stage. This supports an earlier study[10] that children of different age group are more vulnerable and needed greater attention.

‘Play’ could be used as the main method of psychosocial care to work with the children and adolescents.[2] They can also be helped by (a) allowing the child to be with familiar people like parents, siblings, etc., (b) engaging the child in activities like drawing, storytelling, singing, clay modelling, etc., (c) providing security to the child by touching him/her often, reassuring verbally, etc., (d) getting the children back to their earlier routine of eating, sleeping, playing and going to school and (e) allowing the child to talk about his/her earlier feelings of the tsunami either in group situation or at an individual level.[11]

The current study also says that the impact was more in girls than boys. The finding is in conformity with the results of a previous research with same findings.[7] It is suggested that taking time to sit together and sharing the experience of loss, not sending the women away for safety (as the separation can cause anxiety to them), touching and comforting the women, making time for family recreation, getting in touch with other relatives to come and spend time with her, restarting activities that are special to the family like having meals together, praying, playing games etc, all these will help a sense of normalcy back to her life.[11]

Finally, all those who have been the victims of disaster needs psychosocial care.[3] Psychosocial care

programs prevent pathologic developments and further social dislocation.[12] In order to ameliorate the effects of negative thoughts and behaviour the psychosocial care programme needs to facilitate activities that encourage positive interaction among thought, behaviour and the social world.[13]

### **Conclusion**

The present study has several implications for the mental health professionals working in the field of disaster. Firstly, we have seen that the impact of disaster on children is substantial. It calls for a proper need assessment, planning and systematic psychosocial intervention for children who are victims of disaster. Secondly, in the aftermath of a disaster it is essential to help the children to recover their sense of well-being, attempts are to be directed towards normalising their daily routines and emotional reactions through a well tailored psychosocial care programme. Children needs to feel safe and secure and given opportunities to express themselves in an accepting environment. Thirdly, as the children spend major part of the day time in the schools, any psychosocial care programme without involving teachers would be futile. Capacity building exercises for the teachers would help them to be a facilitator to fulfill the mental health needs and issues of the children. Fourthly, it calls for the development of a plan for disaster preparedness for the school children. Finally, disaster management should figure in the course curriculum of the trainees in the field of mental health such as psychiatrists, social workers and clinical psychologists to enable them to gain exceptional knowledge to work with the survivors of the recurrent disasters in the country.

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### **Further reading**

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