



## IMPACT OF DISASTER ON MENTAL HEALTH

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### ABSTRACT

*Mental health is a level of psychological well-being, or an absence of a mental disorder. It is the "psychological state of someone who is functioning at a satisfactory level of emotional and behavioural adjustment*

*Tsunami which occurred in 2004 was considered as one of the largest natural disasters in recent history, resulted in the deaths of over 250,000 people and massive destruction in 8 countries.*

*This paper has focused on the impact of Tsunami on the mental health of the survivors. Research studies conducted in three major counties were analysed and the impact of mental health were studied.*

**India** *Five hundred twenty-three juvenile survivors of the tsunami were studied to determine the prevalence of Post Traumatic Stress Disorder. study revealed a prevalence of 70.7% for acute PTSD and 10.9% for delayed onset PTSD. PTSD was more prevalent among girls and more severe among adolescents exposed to loss of life or property.*

**South Sri Lanka** *Tsunami-exposed adolescents and mothers from two villages in southern Sri Lanka, this study investigated influences of Tsunami exposure and subsequent psychosocial losses on adolescent depressive and post-traumatic stress disorder (PTSD) symptoms. Findings also show that psychosocial losses associated with Tsunami exposure, such as prolonged displacement, social losses, family losses, and mental health impairment among mothers, contribute to depressive and PTSD symptoms in adolescents.*

**Conclusion-** *The results of the research studies are reinforcing the need to develop an effective, culturally sensitive outreach therapy strategy for them. The role of social worker is very vital in identifying the impact, treatment and rehabilitation of the people.*

**Key words-** Mental health, tsunami , depression, post traumatic stress disorder.

## **Introduction**

While most people who are involved in disasters recover with the support of their families, friends and with help of people in the community, the effects on some people's health, relationships and welfare can be extensive and sustained. Disaster can pose substantial social and mental health problems that may continue over extended periods of time. It can challenge the psychosocial resilience of the hardest of people who are affected.

## **Methods**

Two main types of source were used to examine the effects of tsunami on people's mental health. First, a review of the published academic literature and, second, guidance from governmental, non-governmental and other authoritative sources and selected papers that describe how services might be mounted in response to people's psychosocial and mental health needs after tsunami.

## **Findings**

### ***South India***

One area particularly affected by tsunami was southern India. Five hundred twenty-three juvenile survivors of the tsunami were studied to determine the prevalence of PTSD. The survey was conducted in 2 waves. Interviews were conducted by postgraduate psychiatric social work students, proficient in the local language of Tamil and trained in PTSD-related data collection. The Impact of Event Scale-8 items Tamil Version and Child Behaviour Checklist Post-traumatic Stress Disorder-Tamil Revised Version, with age-specific measures and validated for the local culture and language, were used for the study. Our study revealed a prevalence of 70.7% for acute PTSD and 10.9% for delayed onset PTSD. PTSD was more prevalent among girls and more severe among adolescents exposed to loss of life or property. These results indicate that PTSD is widely prevalent among the survivors of the tsunami, reinforcing the need to develop an effective, culturally sensitive outreach therapy strategy for them.

### ***Cudalore***

The findings of the study indicate that in a severely affected coastal fishing village in the Cudalore district of Tamil Nadu, India, PTSD was common among adults aged 18 years or older (12.7%). The odds of PTSD were higher among individuals with no household incomes, women, and those individuals injured during the tsunami. The finding exhibit that individuals with no household incomes were more likely to experience PTSD, implementing social interventions such as income-generating activities and facilitating early return to work are critical. Also, initiatives focusing on women should be a priority. It has been shown that women exposed to trauma are more likely than men with such exposure to develop PTSD,

Individuals injured during the tsunami were more likely to experience PTSD, it was important to provide support and promote a feeling of safety among them. Trained field researchers administered the Harvard Trauma Questionnaire, and the diagnoses generated through this instrument were in good agreement with the clinical diagnoses made by psychiatrists. Capacity for mental health delivery can be enhanced by training local personnel in making assessments, particularly assessments of those experiencing injuries, and further referrals. Depression is prevalent among tsunami-affected individuals seeking mental health assistance but can be managed at the community level.

### ***Srilanka***

Using survey data from 325 Tsunami-exposed adolescents and mothers from two villages in southern Sri Lanka, this pilot study investigated influences of Tsunami exposure and subsequent psychosocial losses on adolescent depressive and post-traumatic stress disorder (PTSD) symptoms. Findings generally support the study hypotheses: disaster exposure (for example experiences of property destruction and deaths of close others) contributes to depressive and PTSD symptoms in adolescents. Findings also show that psychosocial losses associated with Tsunami exposure, such as prolonged displacement, social losses, family losses, and mental health impairment among mothers, contribute to depressive and PTSD symptoms in adolescents. Results suggest that the influence of Tsunami exposure on adolescent mental health operates partially through Tsunami-related psychosocial losses. As expected, positive mother-child relationships provide a compensatory influence on both depressive and PTSD symptoms of adolescents. In addition, high levels of depressive symptoms among mothers increases the detrimental influence of other Tsunami-related psychosocial losses on adolescent mental health. These preliminary findings suggest ways to improve ongoing recovery and reconstruction programs and assist in formulating new

programs for families exposed to both the Tsunami and other natural disasters. More importantly, findings from this pilot study emphasize the urgent need for larger systematic studies focusing on mental health following disaster exposure

### **Objectives**

The levels and correlates of posttraumatic stress reactivity (PTSR) of more than 20000 adult tsunami survivors by analysing survey data from coastal Aceh and North Sumatra, Indonesia and was assessed. PTSR scores were highest for respondents from heavily damaged areas. In all areas, scores declined over time. Gender and age were significant predictors of PTSR; markers of socioeconomic status before the tsunami were not. Exposure to traumatic events, loss of kin, and property damage were significantly associated with higher PTSR scores.

The tsunami produced posttraumatic stress reactions across a wide region of Aceh and North Sumatra. Public health will be enhanced by the provision of counseling services that reach not only people directly affected by the tsunami but also those living beyond the area of immediate impact

### ***Indonesia***

A study evaluated posttraumatic stress reactivity (PTSR) among adult tsunami survivors in Aceh and North Sumatra, the Indonesian provinces where damage was concentrated. The study sample, unlike most studies of mental health after a disaster, was representative of the predisaster population living in areas directly affected by the tsunami, as well as those living in similar areas not directly affected. Respondents had been interviewed in February 2004 before the tsunami as part of the National Socioeconomic Survey (SUSENAS), an annual population-based cross-sectional survey conducted by Statistics Indonesia. The SUSENAS survey was representative at the district level and based on a stratified multistage cluster design. PTSR was assessed by using 7 symptom items from the 17-item. To measure post tsunami levels of PTSR, responses to the questions regarding whether the respondents had ever experienced the symptom were scored from 0 (no occurrence) to 3 (occurred often when it was experienced most intensely) and summed across the symptoms. The resulting scale ranged from 0 to 21 (Cronbach's  $\alpha = 0.70$ ). We created an equivalently constructed scale for PTSR at the time of the interview (Cronbach's  $\alpha = 0.67$ ) using information on current symptom intensity.

Approximately 33% of the respondents experienced the trauma of either hearing the tsunami wave or screams about it, and 6% watched family or friends struggle or disappear. Only 3% of the respondents sustained injuries. Overall, 3% lost a spouse, 5% lost a parent or child, and

nearly 25% of respondents lost other family or friends. Damage or loss of a home or household goods affected 25% of the respondents, and 15% suffered damage or loss of land, livestock, or equipment.

The statistics for the overall sample mask substantial differences across the damage zones. Respondents were assigned to the community in which they were living before the tsunami. Almost 85% of respondents who were living in the heavy-damage zone heard the tsunami wave or screams about it, 25% watched friends or family struggle, 61% lost a family member or friend, and a similar proportion suffered property damage. Such experiences were extremely rare among respondents from the undamaged zone.

With respect to the PTSR index, respondents averaged a score of 4.24 (out of 21) at the time of our interview. This represented a decline of approximately 33% from a mean value of 6.58 for the index computed using the retrospective information on symptom intensity at any point since the tsunami.

In 2004, a 10% subset of SUSENAS respondents had been asked about difficulty sleeping. The questions were asked again in our survey. Analysis of these data revealed that before the tsunami there were no reported differences in sleeping difficulties across damage zones. Sleeping difficulties were reported in all 3 zones in 2005, and differences across zones were statistically significant. The largest before–after increase occurred in the most heavily damaged areas, suggesting that the tsunami affected mental health and that posttsunami comparisons of PTSR across damage zones are a fruitful means of assessing the effect of the tsunami.

### **Common Impact of Disaster on Mental Health**

*Posttraumatic stress disorder (PTSD)* is the most commonly identified disorder that occurs after exposure to a traumatic event. PTSD is characterised by re-experiencing of the traumatic event, avoidance, numbing and hyper arousal. Symptoms need to be present for at least one month and cause clinically significant distress or impairment in functioning to fulfil criteria for PTSD. Rates of PTSD have varied widely, which reflects the impact of different factors associated with events that can influence PTSD development. Across studies, the prevalence of PTSD is higher among direct victims (30-40%) than rescue personnel (10-20%) (Neria, Nandi, & Galea, 2007). It is important to note, however, that other disorders also commonly occur both with PTSD, and independent of PTSD.

*Depression* is the second most commonly observed psychological disorder in survivors of disasters followed by various problems with anxiety (Norris, Friedman, Watson, Byrne, Diaz,

&Kaniasty, 2002. Grief is the normal response to the loss of a loved one, complicated grief refers to those reactions that persist over time. Complicated grief involves yearning for the deceased, bitterness about the loss, inability to proceed with life, preoccupation with the loss, hopelessness about the future, and preoccupation with sorrow. The available research suggests that complicated grief persists in approximately 10-15 per cent of bereaved people, however this rate will be markedly higher following traumatic death. Many studies have demonstrated that complicated grief symptoms form a distinct syndrome that is separate from depression or anxiety (Prigerson et al., 1999). Complicated grief can be a major problem because it is predictive of substantial morbidity (e.g., depression, suicidal ideation, high blood pressure), adverse health behaviours (e.g., increased smoking, alcohol consumption, insomnia), and quality of life impairment. Importantly, there are also distinct treatment responses, insofar as treatments that are effective for depression do not necessarily address symptoms of complicated grief.

**Acute Stress Disorder** DSM-IV introduced the acute stress disorder (ASD) diagnosis to describe stress reactions in the initial month after a trauma. One goal of the diagnosis was to identify people who shortly after trauma exposure would subsequently develop PTSD. The requisite symptoms to meet criteria for ASD include three dissociative symptoms, one re-experiencing symptom, marked avoidance, marked anxiety or increased arousal, and evidence of significant distress or impairment. The disturbance must last for a minimum of two days and a maximum of four weeks, after which time a diagnosis of PTSD should be considered.

**Other Problems** It is also important to note that many survivors of massive disasters report other problems that may not be captured by traditional diagnostic categories. Sleep problems, worry, maladaptive substance use, and interpersonal conflict commonly occur after disasters. Although these may not be diagnosed as mental conditions, they can nonetheless contribute to very persistent problems affecting individuals, families and communities.

There are three groups each requiring a different response: (1) People with mild psychological distress that resolves within a few days or weeks: A very rough estimate would be that perhaps 20-40% of the tsunami-affected population falls in this group. These people do not need any specific intervention. (2) People either with moderate or severe psychological distress that may resolve with time or with mild distress that is chronic: This group is estimated to be 30-50% of the tsunami-affected population. This group covers people that tend to be labelled with psychiatric problems in many surveys involving psychiatric instruments that have not been validated in the local cultural and disaster-affected context.

This group would benefit from a range of social and basic psychological interventions that are considered helpful to reduce distress. (3) People With Mental Disorders MILD AND.

### **Moderate Mental Disorder**

In general populations, 12-month prevalence rates of mild and moderate common mental disorders (e.g. mild and moderate depression and anxiety disorders, including Post-traumatic Stress Disorder (PTSD)) are on average about 10% in countries across the world (World Mental Health Survey 2000 data). This rate is likely to rise

– possibly to 20% after exposure to severe trauma and resource loss. Over a number of years, through natural recovery, rates may go down and settle at a lower level, possibly at 15% in severely affected areas. Thus, in short, as a result of a disaster, the population rates of disorder are expected to go up about 5- 10%. A misconception is that PTSD is the main or most important mental disorder resulting from a disaster. PTSD is only one of a range of (frequently co-morbid) common mental disorders (mood and anxiety disorders), which tend to make up the mild and moderate mental disorders, and which become more prevalent after a disaster. The low level of help-seeking behaviour for PTSD symptoms in many non-western cultures suggests that PTSD is not the focus of many trauma survivors.

### **Gaps in intervention**

A major flaw in many previous disasters has been that many affected individuals have been missed by the health or recovery systems, and they have not sought treatment until years after the disaster. Given our poor ability to identify people who will eventually develop persistent problems, it can be most useful to ensure that people who are most directly affected by the disaster are monitored at subsequent time points, or that sufficient education is available to encourage people who are affected to seek appropriate help.

### **Ongoing stressors**

It is very common in the aftermath of a disaster that survivors will experience a range of ongoing stressors that can compound their reaction. Relocation, loss of employment, pain, physical injury, legal procedures, and financial loss are some of the common burdens that disaster survivors may need to endure. There is considerable evidence that posttraumatic stress is compounded by the presence of stressors occurring in the posttraumatic phase. In the communities destroyed by the recent fires, there will be ongoing stress on those who have lost homes and communities as well as access to normal services (e.g., schools etc). We need

to recognise that these ongoing events contribute directly to persistent adjustment difficulties and can persist for years

## **Results**

The review indicates that tsunami affects people of all ages, can exacerbate or provoke mental health problems, and highlights the importance of secondary stressors in prolonging the psychosocial impacts of flooding. The distressing experiences that the majority of people experience transiently or for longer periods after disasters can be difficult to distinguish from symptoms of common mental disorders. This emphasises the need to reduce the impact of primary and secondary stressors on people affected by flooding and the importance of narrative approaches to differentiate distress from mental disorder. Much of the literature focuses on post-traumatic stress disorder; diagnosable depressive and anxiety disorders and substance misuse are under-represented in the published data. Most people's psychosocial needs are met through their close relationships with their families, friends and communities; smaller proportions of people are likely to require specialised mental healthcare. Finally, there are a number of methodological challenges that arise when conducting research and when analysing and comparing data on the psychosocial and mental health impacts of floods.

## **Role of Social Worker**

The findings of the above researchers show that the social workers can play role to reduce the impact of Disaster on mental health of the people. Grief counselling can assist in helping the victims in accepting the loss and also to overcome the loss. Emotions like anger and denial can be dealt by the social workers. They can assist the victims to utilise the welfare measure and also to return to their normal life.

## **Conclusion**

The findings showed that a multi-sector approach that involves communities as well as agencies is the best way to promote wellbeing and recovery. Agreeing and using internationally understood definitions of and the thresholds that separate distress, mental health and mental ill health would improve the process of assessing, analysing and comparing research findings. Further research is needed on the longitudinal effects of flooding on people's mental health, the effects of successive flooding on populations, and the effects of flooding on the mental health of children, young people and older people and people who respond to the needs of other persons in the aftermath of disasters.

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