

## **Post Tsunami Health Care in Rural Areas**

**Post Tsunami Health Care & Research Project (PTHCRP)**

**The East West Foundation of India (TEWFI)**

**Kadapakkam, Tamilnadu, India**

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## Post Tsunami Health Care in Rural Areas

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The East West Foundation of India (TEWFI) was established in 1992 by Dr. Natteri V. Chandran in an isolated rural coastal community at Alampara in Kadapakkam, about 125 km from Chennai and 46 km. north of Pondicherry in Kancheepuram District, Tamil Nadu.

*The Mission of TEWFI is to work with and for the development and empowerment of the rural poor and marginalized communities in Tamil Nadu through a range of initiatives in health care, child rights, welfare and education.*

TEWFI is a partner organization of The East West Overseas Aid Foundation (TEWOAF) of Australia, an entirely voluntary driven organization, also founded by Dr. Natteri V. Chandran in 1991.

TEWFI's main initiatives are The Uluru Health Care Centre (UHCC) established in 1997 in India and the Uluru Children's Home (UCH) built in 2001 and functioning since 2003. UCH cares for 33 destitute and abandoned girl children as a response to the higher incidence of female foeticide and infanticide in the southern part of India.

Uluru Health Care Centre (UHCC), the first primary health care facility in the region was started in 1997 to provide free medical care to the poor and needy small farming and fishing communities of Alampara and Kadapakkam. Today, the clinic caters to an average of 60 patients each day and has treated more than 15,000 villagers over the last decade. The clinic is used more by women and children and staffed by one medical practitioner and two trained nurses.

Kadapakkam, in which UHCC and UCH are located, was one of the Tsunami affected villages. When the Tsunami occurred, TEWFI was one of the first in the region to reach out to the surrounding villages with relief (food, medicine), loans and nets for a few families.

**The Post Tsunami initiatives** of TEWFI were fund raising by (TEWOAF) and building of two dormitories to house children displaced and orphaned by the Tsunami. However, with the policy of the government having changed the dormitories are open to needy destitute children.

## **Rationale for the Post Tsunami Health Care & Research Project (PTHCRP)**

Provision of psychological support before, during and after a disaster has been in practice for more than five decades. It has also been accepted as one of the priorities in an emergency or a disaster for both individuals and communities. The beginning of the 1990's witnessed the birth and evolution of psychosocial support (Jacobs, 1995; Morgan, 1994; Weaver, 1995). Psychological support has become an important component of the disaster preparation and response repertoire.

The World Health Organization has highlighted the significance of mental health care in emergencies along with International Red Cross and Red Crescent. Mental health care in disasters includes providing psychosocial care, psycho education, enhancing coping mechanisms of survivors and encouraging formation of community based self-help (Abdallah & Burnham, 2001; IFRC, 2001; WHO, 2003).

India has had the unique distinction of experiencing major natural and man made disasters in the last three decades that have highlighted the significance of psychosocial care. Mental health professionals in India have intervened in many of the recent disasters such as the Bhopal gas tragedy, Orissa Super cyclone, Gujarat riots etc. with mental health and psychosocial care and have evolved manuals based on their experiences demonstrating the need for such interventions and making it culturally relevant for different target groups (Suri, 2000, Mukherjee, 2002; Kishore Kumar et al., 2000; and Sekar et al., 2002).

Recent studies (Srinivasa Murthy et al., 2003) report that psychosocial care is an important part of the long-term rehabilitation of survivors. They found in their studies that (i) proactive community interventions are important; (ii) community-level helpers are an important link in providing service; (iii) care should be provided to the entire community; (iv) practical assistance is as important as emotional support; and (v) psychosocial care should be a long-term proposition.

With the tsunami occurring there has been a conscious recognition of the need to render psychosocial care and many more manuals and information of working with children, individuals, community level workers and trainers has emerged by organizations such as the National Institute of Mental Health and Neuro Sciences (NIMHANS), Oxfam (India), CARE, UNICEF etc. (NIMHANS, 2005; VIMHANS, 2005).

The systematic study of psychological support in the form of disaster mental health, trauma counseling, crisis intervention, and psychosocial care is a relatively new (Norris et al., 2002) subject of research as much as it is a new field of care in the large canvas of mental health.

Research has been progressively increasing (Norris et al., 2002), and psychological support in disaster has been defined in many ways: Disaster Mental Health (Jacobs, 1995; Morgan, 1994), psychological support (Simonsen, 2001), trauma counseling (Srinivasamurthy et al., 2003), and Psychological First Aid (Slaikue, 1990). The focus of

the attention of academicians and practitioners to the understanding of people's behaviour and response in the face of disasters and after, through research has enhanced the scientific quality of interventions.

In the face of emerging literature and studies it becomes imperative that agencies involved in service delivery also study the situation before they can embark on services and the kind of services that is required. It is in this light that TEWFI has undertaken this action based research project in five villages surrounding the clinic and in continuation of its commitment to the community it serves. Kadapakkam was served by a few non-governmental organisations that addressed housing and livelihood needs but not long term health aspects Post Tsunami.

The approach in addressing the needs of health care and the community is in keeping with the principles of the WHO in emergencies. General health care will be the basis with the objective of integrating it as part of our primary health care services.

### **The Objectives of the Project**

1. To identify villages needing help and support through needs assessment - with respect to loss of life, housing, livelihood, and health – physical and psychological.
2. Capacity building of project staff through training in Psychosocial Care in disaster situations and mental health care in primary health care setting.
3. To assess the physical and psychological health needs of the men, women and children who survived the Tsunami and plan appropriate health care. Emphasis will be given to children.
4. Provision of regular post Tsunami health care at UHCC and through field clinics and programmes.
5. To provide psychosocial care to the communities based on the assessment. To address through services to children's groups, youth groups, men and women. Attention will be paid to preschool children, senior citizens and physically and mentally challenged persons.
6. Explore possibility of networking with governmental and non-governmental organizations to obtain help for the communities by linking needs of housing, livelihood and resources (as they can impact well being and recovery).
7. Documentation of the activities undertaken.
8. Networking and information sharing with organisations dealing with Post Tsunami health and psychosocial care.

## **Project team**

The Project head is the Founder and Chair, Board of Trustees of TEWFI, Dr. Natteri V. Chandran and a Consultant Advisory Committee of eminent persons in the field of health and mental health in Australia and United States of America are part of the project.

The project team in India is lead by a medical practitioner, project officer, community nurse and is guided and coordinated by a project consultant in Social Work.

## **Methodology**

The Methodology of the project was envisaged in different phases.

**Preparatory Phase** – this phase from September-December, 2005, involved a baseline overview of mapping of the 5 villages, housing and livelihood needs, NGO's working in the area, lists of families etc. selection and preparation of research instruments.

Capacity building of project staff through training in Psychosocial Care in disaster situations and mental health care in primary health care setting was also part of the process.

The assessment was planned in two phases, being the first of its kind in the region.

**Phase I** – January – February, 2006 – Alamparai and Kadapakkam  
Data editing and Analysis – March – June, 2006

**Phase II** - May- July, 2006 – Thaluthalikuppam, Panaiyurperiyakuppam, Panaiyurchinnakuppam  
Data editing and Analysis – ongoing

**Phase III** – July 2006 – Intervention

### ***Tools of Data Collection***

1. The family schedule.
2. Family health details.
3. Economic and social status of family
4. Pre-school child assessment
5. Impact of Event Scale (IES) Child (15 item) – Horowitz et al. 1979.
6. Impact of Event Scale Revised (IES-R) – Adult 22 item – Weiss & Marmar, 1997.
7. Self-Reporting Questionnaire (SRQ) – Harding et al. 1980.
8. WHO – Disability Schedule II, 2002.
9. Quality of Life – WHO, 1999

Data collection instruments 1-4 were formulated and translated by the project team. The various data collection instruments and suitable scales for health and psycho-social assessments were chosen based on their reliability, validity, applicability and use in Indian settings.

### ***Method of data collection***

The census method was used in data collection. The family schedule, family health details and economic and social status schedule was administered to all the families in the villages.

The Quality of Life Scale was administered to the heads of households and the other scales according to the availability of members above 18 years. IES child was administered to children below 18 years.

### ***Training***

A group of young boys and girls from the project area were chosen and given an overview of the project.

The project team was trained by the Project Consultant on the administration of the different instruments.

The research investigators then underwent a four day training programme in the application of the instruments and had an interrater reliability exercise.

## **Major Findings of the Study**

The family profile of 455 families is presented below. A total of 1716 persons were studied, 1199 persons in Alamparai and 517 in Kadapakkam.

### ***Demographic profile***

The demographic profile of the respondents with respect to their age, education, employment and income status is presented below.

The age distribution revealed that 32% nearly one-third of the population were below 15 years. Fifty seven percent of the populations were in the age group of 16-45 years – thus showing that the community had a high population of young and middle aged adults.

The majority had low levels of education – 27% were educated upto high school level, 32% were educated upto primary level and 36% were illiterate.

Among the employed, 44% were employed in the fishing industry – (fishing, selling fish, renting of catamaran, fishnet marketing), 15% of the women did household work, 7%

were unemployed. Post tsunami 62% thought of moving to another place and occupation for survival.

The economic and social situation of families revealed that 86% had members working in their families of which 65% had only a single earning member.

The income status revealed that the majority had low incomes with a monthly income of Rs.1, 000/- per month - 66%. Thirty percent reported an income of Rs.1, 001-2000/- per month.

With regard to housing it was seen that 66% lived in thatched huts owned by them and 23% lived in concrete houses owned by them with minimal basic amenities such as sanitation and drainage facilities.

### ***Losses due to the Tsunami***

The losses refer to material losses and loss of pets/animals. Fortunately these villages did not suffer loss of lives. Eighteen percent reported loss of gold ornaments, 44% reported damage to their houses and loss of household items and 9% said their agricultural land was affected.

Among the livelihood losses 55% of the respondents lost catamarans, 39% lost fibreboats, 67% lost their fishing nets, 47% had lost their boat engines and 16% lost makeshift boats (Vallam).

Chickens, goats, cows and buffaloes were lost by 45%.

### ***Relief and Rehabilitative measures***

With regard to relief and rehabilitation, the majority 75% reported that NGO's and private persons provided higher support than the government to the people in terms of foods, clothes, monetary help, shelter, catamarans and boats.

In describing the rehabilitation measures 43% reported the government being involved in rehabilitation. Forty two percent expressed that Government and NGO's were involved in rehabilitation. The majorities were satisfied with the rehabilitative measures. Currently many of them have been allotted houses and have moved into them.

### **Family Health details – Post Tsunami**

More than half the population 56% did not report any health problem, 44% had suffered fractures, minor injuries and ill health Post Tsunami and were treated by Government and private medical facilities.

Post tsunami 43% used the services of UHCC and 57% did not use it as many were away from the area.

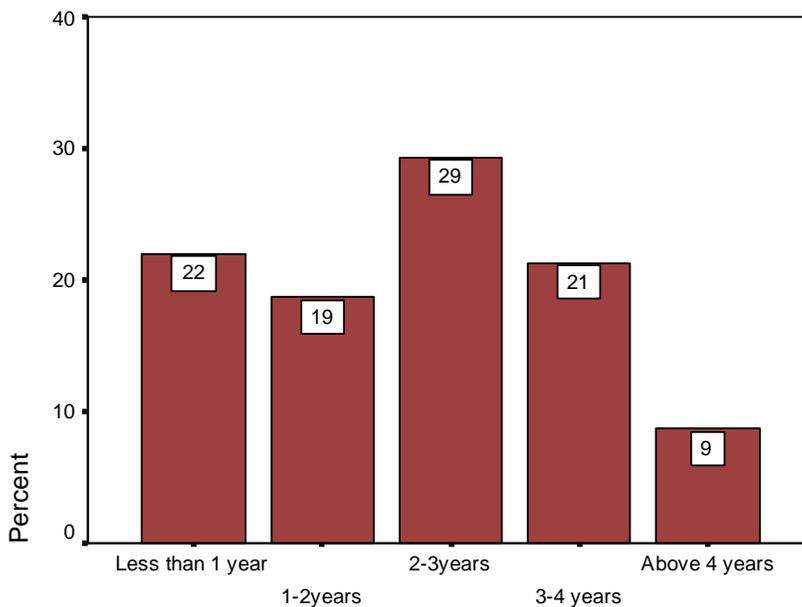
The health status at the time of assessment was that the majority, 72% did not report major health problems, 28% reported communicable diseases, chronic diseases, malnutrition and gynecological problems.

***Needs Expressed***

Among the many needs expressed 43% said they need more medical assistance in the area, 25% expressed the need for support for their children’s education and development, 80% still requested assistance with livelihood needs, 67% requested financial assistance and 8% wanted vocational training

**Preschool Child**

**TABLE I - AGE WISE DISTRIBUTION OF CHILDREN**



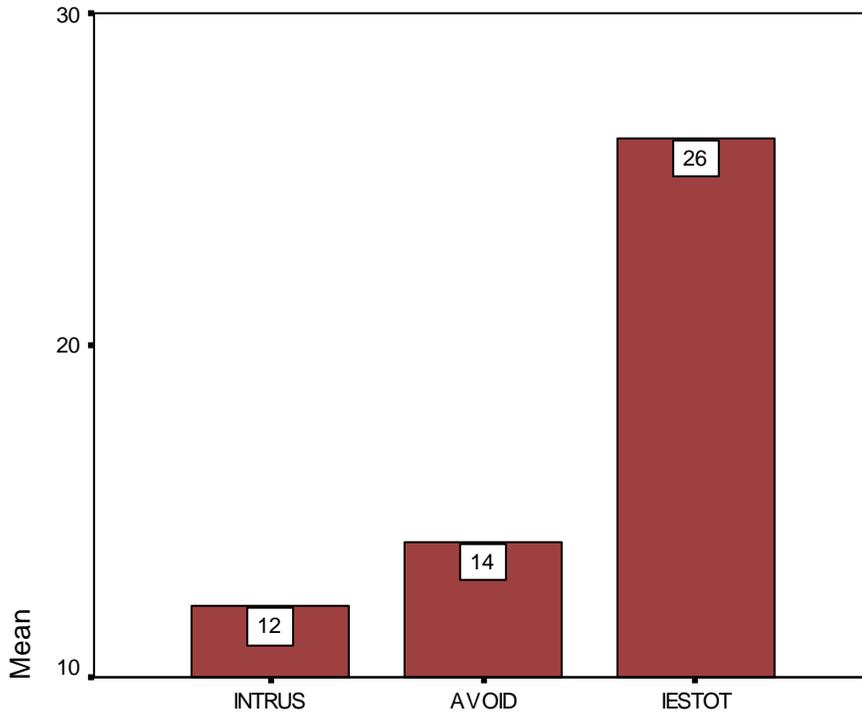
AGE1

Majority were of normal birth weight, did not have any congenital anomalies, with normal milestones and were completely immunized. Nearly fifty percent of the children were malnourished and underweight.

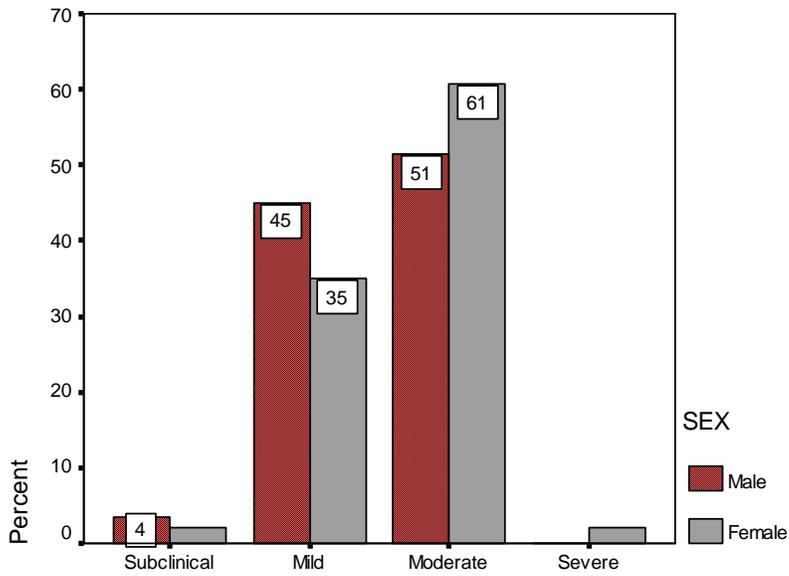
**Impact of Event Scale (IES) - Child**

280 children (140 boys and 140 girls) were administered the scale and the results are given below.

**TABLE II - DISTRIBUTION OF INTRUSION, AVOIDANCE AND IES TOTAL**



**TABLE III - DISTRIBUTION OF IES SCORES BY GENDER**

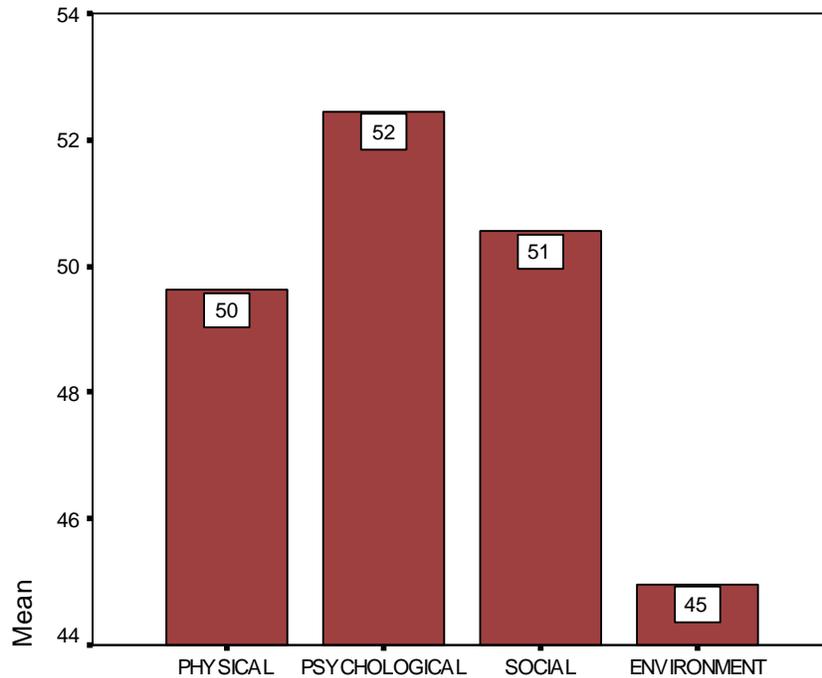


IESTOT1

From the data it is seen that 96% of the children had mild to moderate impact of the Tsunami. The impact among the girls was found to be slightly higher.

## Quality of Life

**TABLE IV - QUALITY OF LIFE OF THE RESPONDENTS**



The quality of life of the heads of the household is given in terms of mean percentages of quality of life and is found to be of moderate level in all four dimensions with the environment dimension being slightly lower in keeping with the experience of the Tsunami.

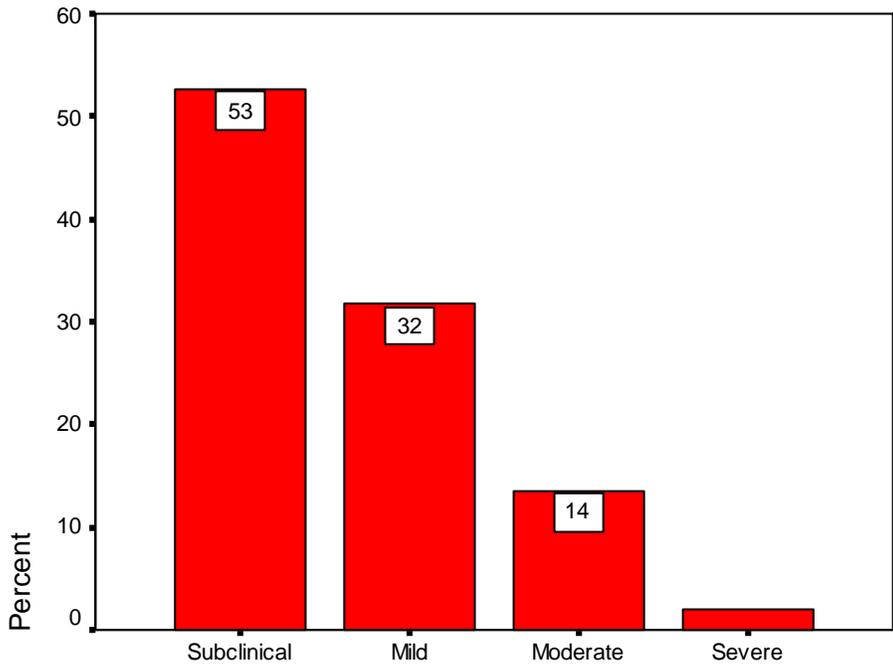
## Self Reporting Questionnaire

**TABLE V – SELF REPORTING QUESTIONNAIRE – SRQ**

Score	%
Less than 7	69.6
Above 8	30.4
N = 961	100

The Self Reporting Questionnaire was administered to adults above the age of 18 years. The score according to case versus non case points to the fact of 31% experiencing distress at the time of assessment.

**TABLE VI - DISTRIBUTION OF RESPONDENTS BASED ON SEVERITY**



SRQTOT2

The above graph of the levels of Self Reporting Questionnaire also reveals that 47% of the population has distress that is higher than the levels for the morbidity of normal population.

**Impact of Event Scale (IES) - Adult**

The Impact of Event Scale was administered to 961 adults above 18 years.

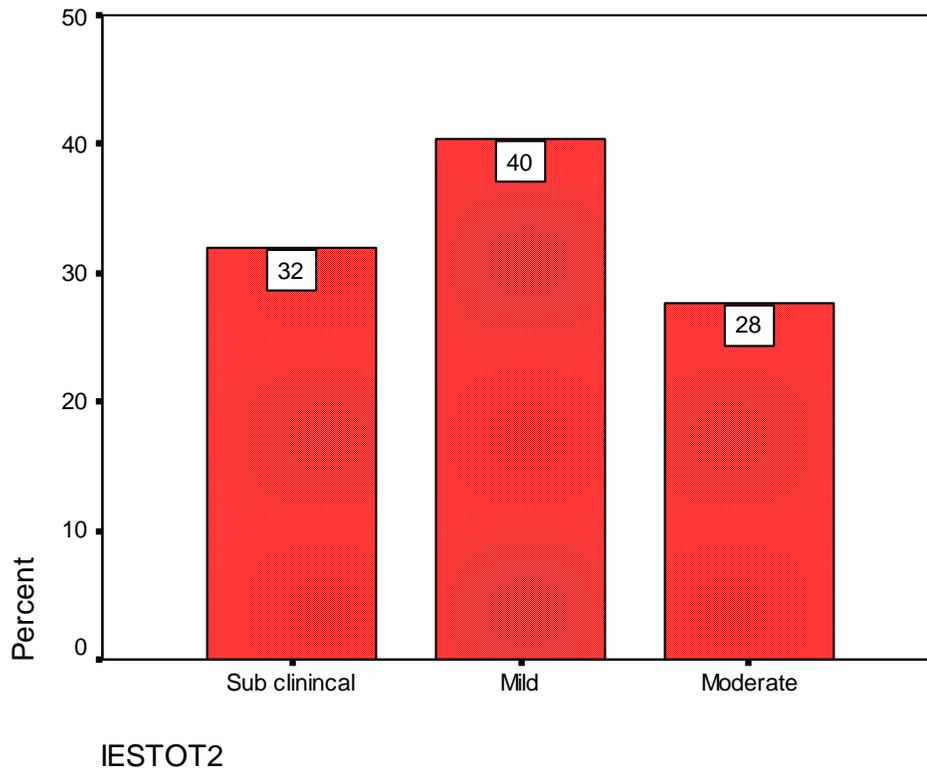
**TABLE VII - DISTRIBUTION OF MEAN INTRUSION, AVOIDANCE, HYPER VIGILANCE AND IES TOTAL**

Domains	N	Minimum	Maximum	Mean	Std. Deviation
INTRUSION	961	1.00	25.00	11.394	4.49
AVOIDANCE	961	.00	29.00	12.46	4.823
HYPER VIGILANCE	961	.00	24.00	10.73	5.01
IES TOTAL	961	4.00	68.00	34.58	12.96

Taking into consideration the means, the overall mean IES score of 34.58 supports the finding that the majority of adults still had a mild impact. The age distribution with regard to mean IES scores reveals a slightly higher mean of 35 for age groups 26-75 years and a mean of 33 for the younger age groups below 26. This reflects that the mean

scores hold true for the entire population with little variation. Gender wise too, the mean scores were same for male and female.

**TABLE VIII - IES CLINICAL STATUS - DISTRIBUTION OF AVOIDANCE, INTRUSION AND IES TOTAL**



The table of mean scores on the domains of the IES adult scale reveals that one third of the population has only sub clinical symptoms. Of them 40% have mild impact and 28% have moderate impact. Taking into consideration the means the overall IES score of 34.58 also supports the finding that the majority of adults still had a mild impact.

## Disability Assessment

**TABLE IX - DISTRIBUTION OF DISABILITY AMONG THE RESPONDENTS**

Characteristics	Domains	N	%
H1.Overall Health	Very good	143	15.1
	Good	442	46.6
	Mild	316	33.3
	Moderate	45	4.7
	Bad	2	0.2
H2.Overall disability interference	None	124	13.1
	Mild	287	30.3
	Moderate	413	43.6
	Severe	106	11.2
	Extreme	18	1.9

The health of the population of 948 persons was reported and 38% reported their health status as mild to moderate.

The overall disability interference was found to be high with nearly 57% of the adult population assessed reporting moderate to extreme levels in their functioning.

**TABLE X – DISABILITY ASSESSMENT**

Disability	N	Minimum	Maximum	Mean	Std. Deviation
H3. No. of days disability present	948	0	30	12.69	7.22
H4. No. of days totally unable to do usual activities	948	0	30	9.86	5.16
H5. No. of usual activities had to be Reduced	948	0	30	8.17	4.51
Percentage of Disability	948	.00	80.56	30.9306	18.7758

The level of disability as shown by percentage of disability taking into consideration the number of days disability present, number of days usually unable to do usual activities and the activities that had to be reduced shows again nearly one third of the population had disability higher than any normal population. The probable reason being their day to

day life may still not have come back to normalcy due to non-restoration of their livelihood activities and decline in day-to-day functioning.

The community with low levels of education had suffered livelihood losses and still faced insecurities in their occupation. Overtly they did not report health problems however, based on all the scales it is seen that the impact of the Tsunami was mild to moderate for the population and one-third were found to be distressed.

Both combined affecting the functionality to a moderate to severe extent, which in turn resulted in a moderate quality of life.

The impact in the children was also found to be moderate – severe, a little higher than adults with a higher impact among the girls.

### **PHASE III – INTERVENTION**

The project activities were initiated since July based on the above findings of the assessment at Alamparai and Kadappakkam villages. Children, senior citizens and physically and mentally challenged persons are often marginalized groups in disasters so our project reaches out to them as a priority.

#### **Programmes**

- Mobile Health Clinics.
- Psychosocial interventions with children.
- Vocational Training for youth and adult men and women initiated. Support groups will give opportunities to discuss their concerns with life and livelihood issues and find ways to resolve them.
- Networking with organizations working in health and disaster management has been initiated to train the staff and in turn, the communities.
- Networking and information sharing with organisations dealing with Post Tsunami health and psychosocial care.

#### ***Mobile Health Clinics***

Mobile Health Clinics are organized once a week to Alamparai and Kadappakkam villages and include activities for preschool children and visits to senior citizens in their homes.

### Activities for the preschool children

a) Periodic weighing of the preschool children is done by the community health nurse. The weights are recorded in the growth chart and the progress is noted.

b) Regular visits are made by the doctor and the community nurse to the Anganwadis every week. The underweight children as noted in the growth chart are examined, dewormed and necessary vitamin and nutritional supplements given. Nutritional advice & health education is given to the mothers accompanying the children.

c) Supplementary Nutrition Programme: According to the data analysis nearly 45% of the under five children are under weight, though their birth weights were normal. The supplementary nutrition programme is conducted by the Community Nurse with the help of youth groups organized by our staff in the community. The programme targets pregnant women, lactating mothers and other women. The methods of preparing supplementary foods, its importance to the growth of the children and the method of feeding are discussed. Competitions are held and prizes are given to the best recipes.

The body weight of the children has improved after the periodic visits by the team.

### Visit to senior citizens

The details of the senior citizens who are unable to come to the clinic are obtained through the youth groups functioning in the community. The Doctor and the Community nurse visit them in their houses once a fortnight. Their health problems are addressed and if needed, referrals arranged through the youth groups. Through the activities for the older people we are able to alleviate their physical suffering and also their mental suffering to a certain extent.

Besides the services of the clinic are utilized by the families who have moved into the tsunami houses close to the clinic.

### ***Psychosocial Care & School Health Programme***

Based on the findings of the study revealing moderate to severe impact of the tsunami psychosocial interventions are organized with the community children. Once a week, systematic activities are organized to help the child gain mastery over the event, help the children feel good about themselves, develop understanding and positive skills.

Forty five sessions have been held so far in three villages using various mediums such as stories, talking, play, games, art medium etc.

Among the needs expressed 25% of the population expressed need for improvement in child education and development. The foundation has an enduring collaboration with the school and has employed three teachers in the school towards a better teacher-student

ratio, enhancing quality of education and ensuring better attendance and retention in schools.

Every Friday the School Health Programme is organized by the community health nurse. The one and only toilet block at the local primary school for the 250 children has been built by the Foundation. These initiatives of the Foundation have contributed to enhancing the quality of rural school education and keeping it stable even after the tsunami unlike many other communities.

### ***Vocational Training***

The Foundation taking into consideration the need for education and minimal infrastructure in the villages has introduced free computer classes for the village children in the children's home during the weekends.

The Foundation also runs free computer classes for the village youth who would like to pursue an alternate vocation.

A permanent computer centre is being built by the foundation as a measure to educate and train the village people in alternate vocations and also to emerge as a knowledge centre for information related to fishing, other technical, educational and employment information online.

### ***Micro-insurance for grassroots people***

As part of helping the men groups who reported the insecurities in the fishing trade, post Tsunami and their realization that they lacked skills otherwise the Foundation has is reaching out to the men through the Life Insurance Policy titled 'Jeevan Mathur'.

Confederation of NGOs in Rural India (CNRI) – of which TEWFI is a member, has selected TEWFI as one of the 7 NGOs in Tamil Nadu to implement this scheme. This has provided an opportunity for the youth to be trained and perceive this as alternate employment.

The objectives of these policies are to provide social security to the policy community. Increase savings habits for the community. The significance of the scheme is that it covers them during accidents and disaster situations. It has disability benefits and helps people become self reliant.

Through this scheme, youth groups are being initiated to also address health and mental health issues associated with their lives.

The programme is also planned to be extended to women by also training them for employment and to encourage savings habit among them.

## *Networking*

The Foundation has been networking with organizations working in health and disaster management to train the staff and in turn, the communities on disaster preparedness.

Networking and information sharing with organisations dealing with Post Tsunami health and psychosocial care and rehabilitation is also undertaken by the Foundation.

## **Future Plans**

- To extend the activities to the Phase II villages after data analysis.
- To strengthen the alternatives for vocational training and employment initiated for the community.
- To initiate psychosocial care programmes for the other village children and life skills programme.
- Special attention will be paid to address alcoholism, which is a major problem in the villages.
- Further, the staff are coordinating with NGOs for training in disaster preparedness with a focus on preparing the community for disaster management.
- To integrate psychosocial and mental health care as part of primary health care.

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