A Case Study of Post Traumatic Mental Disorders. The Floods and Earthslips in Rathnapura District, Sri Lanka in 2003

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The victims of floods and earthslips in Rathnapura district did not show any difference to the international scenario of the post traumatic mental disorders' symptoms, especially in the initial period after the disaster. But these symptoms did not develop into the level of disorders asif in many recorded international cases and as the general acceptance of trauma studies. The victims of Rathnapura disaster showed a rapid speed of recovery, and it is another different characteristic of this event. However, these two different factors were neither accidental nor a result due to false data of the survey. The surveys done on tsunami in 2004 and the hospital records of the civil war victims illustrate the same picture. As the possible reasons for this advancement of the Sri Lankan trauma victims one can guess that the Sri Lankan society (and its culture) has a great capacity to absorb a trauma. However, it is clear that more and more researches should be done about the Sri Lankan trauma victims and the capacity of the society to absorb a trauma.

Introduction

A trauma is a distinguish psychic state that expresses extreme fear, anxiety, and withdrawal and avoidant responses. As these mental states and behavioral responses are in an extreme and unusual intensity (not in the level of fear or anxiety caused by threatening situations in the daily life); they are considered as mental disorders. The events which cause trauma are called 'traumatic events' or 'disasters'. The mental disorders caused by traumatic events are known as 'post traumatic mental disorders'.

The psychologists have identified three criteria there should be in a traumatic event. They are, first, the nature of the event. (This is an event that distressing and not seen in the usual range of human experience). According to American Psychiatric Association, a traumatic event is "...a psychological distressing event that is outside the range of usual human experience... and would be markedly distressing to almost anyone, and is usually experienced with intense fear, terror, and

helplessness..." (American Psychiatric Association. 1987. P. 247). The influence of a traumatic event can be divided into three phases on the basis of time. The first is the initial period soon after the event, during which both human lives and their properties are destroyed.

The second phase comes after the initial damage and causes some complex social and health problems like epidemic illnesses; disable persons; and displacement of survived persons. The third phase is available if the event is in a mass scale, such as a natural disaster or a huge industrial accident. A mass scale traumatic event could reduce the Gross National Product and Gross National Income; and could confuse the social systems including family relationships, interpersonal relationships, and moral values and cultural norms.

In addition to this general explanation, Lars Weisaeth developed a more systematic time based model to clarify the development of a disaster. (Weisaeth, L. 1995. P. 81). In this model Weisaeth considers three parallel factors – they are, the activation of the disaster; intensity of the trauma; and management of the disaster and the trauma.

Table 1

L. Weisaeth's model of disaster development

Time phase	Proximity of the danger	Coping
Steady state	Disaster	Preparedness
Crisis	Approaching	Crisis Management
Disaster impact	Imminent / present	Survival rescue
After periodness	Passed	Working through
- Shock phase		shock and post
- Reaction phase		traumatic stress
- Repair phase		reactions
- New orientation		

The second criteria to be a traumatic event is its effect on individuals and groups. As described above, a traumatic event is a sudden, dangerous overwhelming, and a destructive force. It could make physical, mental and social damages on the victims. The third criteria is the responses of individuals and groups to the event. Regarding traumatic event of floods and earthslips, the destruction during the "disaster impact phase" and the responses to that (in Weisaeth's model) are as given below.

Table 2

The damages of a traumatic event of floods and earthslips and the psychological responses to that.

The Event	Most Probable Psychological Responses
Physical injury	Mental Shock
Loss of property (including home)	Anxiety; Despair; Helpsessness
Loss of lives of family members, relations, friends, and neighbours	Grief
Seeing the people dying	Shock; Terror; and Guilt
Seeing the earthslip	Shock; Terror
Struggle with mud and water and saved the life	Shock; Terror

Though, there is a less opportunity for a catastrophy like Pompe, in the modern world; because of factors like increasing population density, urbanization, climatic changes, and degrading of the environment, both frequency of disasters and the intensity of their damages have increased. With the increment of frequency and intensity of traumatic events their socio-political impact also have increased. However, most of studies have shown that the trauma and the psychic scars are much more harmful than physical damages of a disaster. Therefore, trauma and trauma management have become a new study area in Psychology.

Conceptualization of Post Traumatic Mental Disorders

Trauma and traumatic events were first identified during American Civil war and at that time it was called 'Nostalgia'. During the World War I, it was identified as either 'shell shock' or 'battle fatigue'; during the World War II, it was known as 'War Neurosis'. (Timble, M.1985) In its early history, trauma was described as a war effect. In 1960s the researchers noticed that trauma was available in different contexts, apart from war. For example raped and battered women also suffer traumatic symptoms. (Burgess, A.W. & Holmstorm, L.L. 1974; Walker, L.C. 1984). In 1970s torturing was also identified as a traumatic event. (Sherstha, N. M. & Sharma, B. 1995). In 1980s natural disasters were recognized as a traumatic event (Leivsky, S. 1984).

The studies done on the Vietnam War veterans gave the final shape to the concept of Post Traumatic Mental Disorders. In 1980 DSM-III coined the term Post Traumatic Stress Disorder (PTSD) and gave a systematic classification of the symptoms of the disorder (1). (American Psychiatric Association, 1980) After introducing the concept of PTSD it was succeed to attract the interest of many researchers. They described that PTSD is the most common post traumatic mental disorder. The researchers found that the fear and terror made by disasters could effect the person's physiological systems too. According to L.R. Squire and others it could make some alterations to the brain structure. (Squire, L.R. & Zola – Morgan, S. 1991) A. Shaler noticed that biochemical and neurological changes also happen due to a disaster. (Shaler, A. 1991).

However, the studies done after 2000 show that PTSD is not the one and only post traumatic mental disorder. For example, Breslau and others pointed out that apart from PTSD the disorders like anxiety, depression, psychosomatic illnesses could be seen after a disaster. Violence and substance abuse also available as post traumatic (not related to PTSD) mental disorders. (Breslau, N. et. al. 1991). In other words, PTSD is not sufficient, as early researchers thought, to describe post traumatic mental disorders.

To overcome the limitations of PTSD, a new concept, DESNOS – Disorders of Extreme Stress not Otherwise Specified – was introduced in 2005. Dean G. Kijpatrick introducing the concept, stated that DESNOS is a concept that is unique to all other comorbid disorders (Kijpatrick, D.G. 2005. P. 382). Though the term DESNOS was coined in 2005, the concept was introduced in 1990s. J. L. Herman in 1992, for the first time, introduced the concept under the terminology of 'complex PTSD'. (Herman, J.L. 1992). In his early introduction, he identified this as a more complex expression of PTSD rather than an unique disorder. After the introduction of DENSOS concept, DSM-IV recognized it under the category of 'Associated and Descriptive Features of PTSD'. (American Psychiatric Association, 1994. P. 210).

The contemporary researchers and practitioners recognize DESNOS as a supplement to PTSD, not a substitute[2]. They agree now that 'pure' PTSD is rare among trauma victims than thought earlier. According to J.C. Ballenger and others, PTSD victims have symptoms

of other major mental disorders too; such as depression, phobia and mania[3]. (Ballenger, J.C. et. al, 2000). McFarlane observed that 10.30% - 37.07% of PTSD persons suffer from schizophrenic symptoms. (McFarlane, A. 2001). Considering the whole research history it can be agreed that post traumatic mental disorders are a complex combination of various mental disorders including PTSD.

Objective of the Study

The objective of this study is to examine the nature of mental disorders that occurred after the disaster of floods and earth slips in Rathnapura District. This disaster is an appropriate case to study the psychological reactions of the Sri Lankan society to a traumatic event. Not only the psychological reactions but the socio cultural calibrety to manage a trauma is also expected to examine by this study.

Methodology

Basically this is a clinical study; not a systematic social survey. The necessary data for the study was collected while supplying counselling services and social services for the victims of floods and earth slips. Six hundred and twenty victims from five displaced camps were studied. (The table number 03 shows the five displaced camps and the population of each camp).

Table 3

Displaced camps and their population.

Camp	Kshestraramya	Pothupitiya	Alapatha	Pebotuwa	Jayabodhiya	Total
Population	150	120	140	170	40	620

These victims of the 5 camps had different experiences of the disaster.

Kshestraramaya and Pebotuwa: The victims of these two camps were from Nivithigala Divisional Secretariat. Nivitigala mainly suffered from floods. Most of the victims of these two camps had to struggle with floods to save their lives. The most significant symptom they had was muscle pains and cramps.

Pothupitiya and Alapatha: The Pothupitiya camp was situated at Kalawana Divisional Secretariat and the Alapatha camp was situated at

Udakarawita Divisional Secretariat. Both divisional secretariats mainly suffered from earthslips. Alapatha became the central area of the tragedy as a whole village of that divisional secretariat was lively buried by an earthslip. Most of the victims of the Alapatha camp saw earthslips. Many of the victims of the Pothupitiya camp struggled with earthslips and survived. Majority of the victims witnessed how their family members, relations and friends were buried alive and how their properties were destroyed.

Jayabodhiya: Jayabodhiya belonged to Hungamuwa Divisional Secretariat. They were the people who suffered least from the study population. The camp was established after 3 weeks of the disaster, as a safety action assuming that the floating flood water from highlands would drown the area. However, neither their lives nor their properties were damaged. In this study, the Jayabodhiya camp was utilized as a controlled group.

The data for the study were collected at four stages by using two collecting methods. These two data collecting methods were used by two professional groups. One professional group was the government Social Service Officers (SSO) who worked in camps for the well being of the displaced; the other professional group was the counsellors of Sri Lanka National Institute of Professional counsellors (SLNIPC) who did counselling for the displaced under the invitation of the Government. The Social Service Officers had a training in counselling and both groups worked together. Both groups were supervised by SLNIPC.

The Social Service Officers collected data in the first stage mainly for an administrative purpose. The Counsellors collected data in the second and third stages for a clinical purposes. In the fourth stage the Social Service Officers collected data for both administrative and clinical purposes.

The time framework of the data collection was as follow.

The first data collection: From 17th May to 24th May, 2003. This was during the 1st week after the disaster. The data collection was done by Social Service Officers.

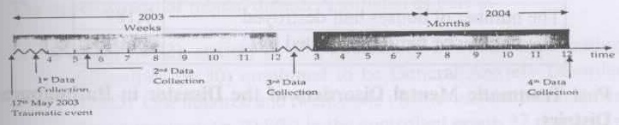
The second data collection: From 6th to 7th June, 2003. This was the 3rd week after the disaster. The data collection was done by the Professional Counsellors.

The third data collection: From 23rd to 24th July, 2003. This was the 10th week after the disaster. The data collection was done by Professional Counsellors.

The fourth data collection: The fourth and final data collection was done by the Social Service Officers, after 12 months of the disaster, in May 2004. This final data collection was done on the basis of Counsellor's clinical data.

Draft 1

Time framework of data collection.



Floods and Earthslips Disaster in Rathnapura District, 2003

The floods and earthslips in Rathnapura District 2003, was the most harmful natural disaster in Sri Lanka until the Tsunami, 2004 in its recent history. The disaster mainly effected three districts : Rathnapura, Matara and Kalutara. While Rathnapura and Matara experienced both floods and earthslips, Kalutara experienced floods. Rathnapura became the center of the tragedy as the number of deaths, number of displaced people, and the destruction of property kept a high level than other two districts.

From 11th to 15th of May, 2003, Rathnapura experienced a high level of rainfall. For example, 11th of May : 135.8 mm; 15th of May : 99.6 mm; and 16th of May : 345.2 mm. After the heavy rainfall, floods and earthslips started 17th of May, 2003. Rathnapura as a highly sensitive geographical area to its river drainage system and mountain ranges with unstable soil was immediately effected by the heavy rainfall. Later, two rivers which flow through Rathnapura area carried rain water to Western and Southern low land vallies; that is, River Nilwala to Matara and River Kalu to Kalutara and swamped the surrounding areas.

The damage made by the disaster, both in all three districts and Rathnapura district as follows (Annual Progress Report, 2003).

Table 4

The disaster in all three districts

The number of deaths	235
The number of missed	19
The number of houses completely destroyed	9,974
The number of houses half destroyed	30,878
The number of families effected by	145,891

Table 5

The disaster in Rathnapura districts

The number of deaths	122
The number of houses completely destroyed	3,286
The number of houses half destroyed	9,189
The number of families effected by	34,043

Post Traumatic Mental Disorders of the Disaster in Rathnapura District

The first stage of data collection (during the first week) showed anxiety (= 418), lack of appetite (= 310), and insomnia (= 247) were the most common symptoms among the displaceds. The immediate responses to terror and fear muscle pains and cramps (= 139), constipation and urinating problems (= 123), and excessive menstrual bleeding (= 104) – as noticed by international researchers, were also present with the researchers, were also present with the displaceds. Depressive symptoms and PTSD symptoms – nightmares (= 102), excessive risk taking (= 24), and intrusive recollection (= 232) – were also available (see the table No. 06). The graph No. 02 shows the intensity of those symptoms on the gender basis.

The second data collection (during the third week) showed a sharp decreasement of physical symptoms, such as muscle pains and cramps (= 19), constipation and urinating problems (= 16), and excessive menstrual bleeding (= 30). (The table No. 7 shows the symptoms during the third week). However the psychological symptoms persisted giving the shape of particular mental disorders.

The developments of physical and mental symptoms during the first 3 weeks can be seen from the Graph No. 03. The graph clearly shows that the high level of responses to terror and fear was not unusual. But eventually the intensity of the symptoms was reduced to the level of specific mental disorders. Regarding the non-controlled group, 302 persons (52.06%) suffered from at least single symptom. In the controlled group the percentage was 77.5%. Though, a higher percentage of the non-controlled group suffered from symptoms, those symptoms were mainly related to anxiety. (for example, anxiety = 32.5 and difficulty in concentrating 32.5). Since the stationing of the controlled group was close to the situation of a non-victimized group of people; the data about the non-controlled group is a clear indication on how a disaster could effect the mental health of a non-victim of a disaster.

The development of mental disorders initiated as below.

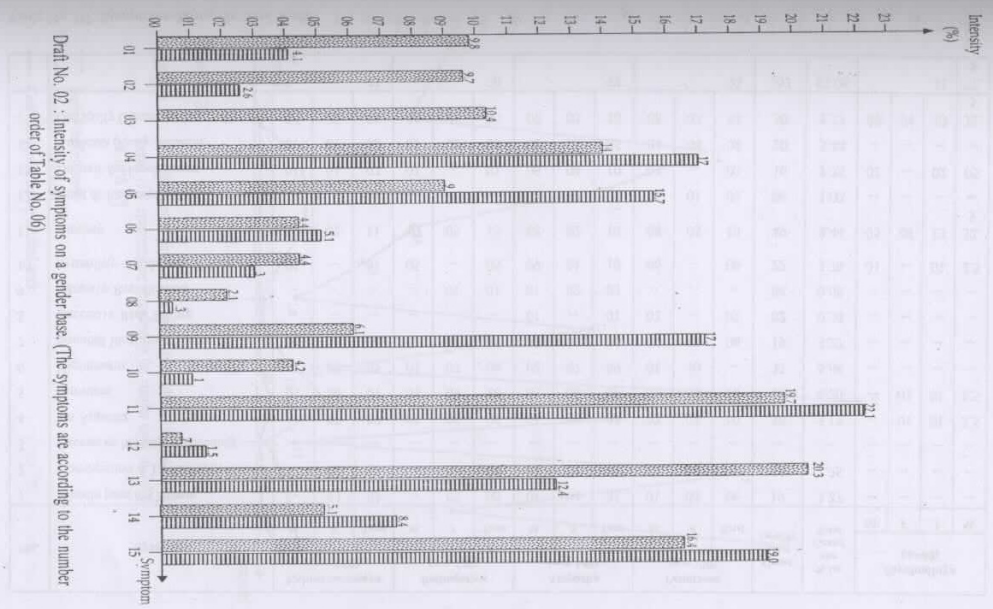
- Anger (= 22), anxiety (= 49), amnesia (= 20) and concentration difficulties (= 30) combined to be General Anxiety Disorder (GAD). One hundred and twenty one victims suffered from above three symptom. (= 20.8%) in the controlled group 27 persons (n = 40) suffered from the same as above (= 69.9%).

- Appetite problems (= 30), insomnia (= 36), guilt and responsibility (= 60), and despair and hopelessness (= 30) combined to be depression. Eighty eight victims (= 15.1%) suffered from these psychological symptoms. In the controlled group it was only two ! (= 5%).

There were four PTSD related symptoms. Those were nightmares (= 33); suicidal ideations and attempts (= 19); excessive risk taking (= 2); and intrusive recollection (= 4). Hence, 58 persons (= 10%) were vulnerable to be PTSD. Any PTSD symptoms was not available with the controlled group.

No.	Symptom	Camp												Total (n = 620)			% for the Grand Total
		Kshestraramaya (n = 150)			Pothupitiya (n = 120)			Alapatha (n = 140)			Pebotuwa (n = 170)						
		M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Grand Total	
1	Muscle pain & Cramps	18	07	25	20	08	28	28	11	39	32	15	47	98	41	139	23.96
2	Constipation & Urinating Problems	20	05	25	25	06	31	25	07	32	27	08	35	97	26	123	21.20
3	Excessive Menstrual Bleeding	--	20	20	--	18	18	--	35	35	--	31	31	--	104	104	17.92
4	No Appetite	28	33	61	33	40	73	47	52	99	32	45	77	140	170	310	53.44
5	Insomnia	18	30	48	20	38	58	31	50	81	21	39	60	90	157	247	42.58
6	Nightmares	08	10	18	08	11	19	11	17	28	17	20	37	44	58	102	17.58
7	Suicidal Ideation & Attempts	16	11	27	11	08	19	15	10	25	05	01	06	47	30	77	13.27
8	Excessive Risk Taking	05	--	05	03	--	03	08	02	10	05	01	06	21	03	24	4.13
9	Intrusive Recollection	12	41	53	12	37	49	28	47	75	09	46	55	61	171	232	40.00
10	Irritability / Outbursts of Anger	05	--	05	09	01	10	16	04	20	12	05	17	42	10	52	8.96
11	Anxiety	37	49	86	37	43	80	58	61	119	65	68	133	197	221	418	72.06
12	Guilt & Responsibility	01	02	03	--	01	01	05	08	13	01	04	05	07	15	22	3.79
13	Despair & Hopelessness	47	27	74	41	24	65	57	39	96	58	34	92	203	124	327	56.37
14	Amnesia (Daily Matters)	15	21	36	11	18	29	16	25	41	09	20	29	51	84	135	23.27
15	Difficulty Concentrating	31	37	68	29	39	68	47	53	100	57	61	118	164	190	354	61.03

Table No. 06 : Symptoms during the first week.



Draft No. 02 : Intensity of symptoms on a gender base. (The symptoms are according to the number order of Table No. 06)

No.	Symptom	Kshestraramaya (n = 150)			Pothupitiya (n = 120)			Alapatha (n = 140)			Pebotuwa (n = 170)			Grand Total (n=420)	% for the Grand Total	Jayabodhiya (n=40)			
		M	F	Total	M	F	Total	M	F	Total	M	F	Total			M	F	T	%
1	Muscle pain & Cramps	--	03	03	--	05	05	01	04	05	01	05	06	19	3.27	--	--	--	--
2	Constipation & Urinating problems	--	01	01	--	04	04	01	03	04	01	06	07	16	2.75	--	--	--	--
3	Excessive Menstrual Bleeding	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
4	No Appetite	--	07	07	01	05	06	01	06	07	02	08	10	30	5.17	--	01	01	2.5
5	Insomnia	01	06	07	01	09	10	03	06	09	02	08	10	36	6.20	--	01	01	2.5
6	Nightmares	--	05	05	01	07	08	02	07	09	01	10	--	33	5.68	--	--	--	--
7	Suicidal Ideation & Attempts	04	--	04	03	02	05	03	01	04	04	02	06	19	3.27	--	--	--	--
8	Excessive Risk Taking	--	--	--	--	--	--	01	--	01	01	--	01	02	0.34	--	--	--	--
9	Intrusive Recollection	--	--	--	--	01	01	01	02	03	--	--	--	04	0.68	--	--	--	--
10	Irritability / Outbursts of Anger	01	--	01	05	--	05	09	01	10	06	--	06	22	3.79	01	--	01	2.5
11	Anxiety	09	02	11	10	05	15	08	02	10	08	05	13	49	8.44	05	08	13	32.5
12	Guilt & Responsibility	--	--	--	--	--	--	02	03	05	--	01	01	06	1.02	--	--	--	--
13	Despair & Hopelessness	01	01	02	01	--	01	06	04	10	03	--	03	16	2.75	02	--	02	05
14	Amnesia (Daily Matters)	01	01	02	03	02	05	02	03	05	04	04	08	20	3.44	--	--	--	--
15	Difficulty Concentrating	02	02	04	04	01	05	07	03	10	08	03	11	30	5.17	09	04	13	32.5
	Total			47			70			92			93	302	52.06			31	77.5

Table No. 07: Symptoms during the third week.

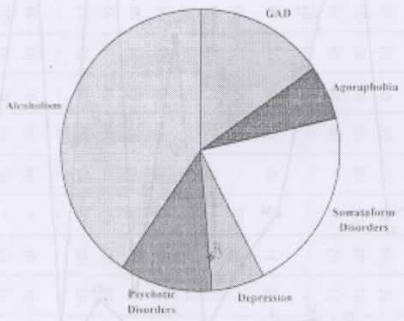
Graph No. 03 : Development of physical and mental symptoms during the first 3 weeks. (The symptoms are according to the number order of Table No. 06 & 07)

— During the first week
— During the third week
— Controlled group during the third week

After 10 weeks of the disaster (the third data collection) the mental disorders took their final shape. The physical symptoms of some victims developed as somatoform disorders. But, surprisingly PTSD did not develop as a specific disorder: instead some victims who had PTSD related symptoms developed to be depression. Soon after the disaster the liqueur consumption of the male displaced was increased. During the 3rd data collection, this habit was developed as alcoholism. The percentage of alcoholics was 13.62! The figures of mental disorders are in table No. 08, and their comparative portions are in the graph no. 04.

Graph 4

Comparative portions of mental disorders after 10 weeks of the disorders.



The data of the final collection (after 12 months of the disaster) showed a further decreasement of the population who suffered from mental disorders. It was 20.68% in the non-controlled group; and 12.5% in the controlled group. Comparing to the 10th week, in the non-controlled group the decreasement was about 62% in the controlled group it was about 71%. The counselling and psychiatric services given during the first 10 weeks helped this decresement. The table no. 09 shows the population who suffered from various mental disorders; and the graph no. 05 shows the decrease percentage of the population who suffered from mental disorders during the 10th week and 12th month after the disaster.

No.	Symptom	Kshestraramaya (n=150)			Pothupitiya (n = 120)			Alapatha (n = 150)			Pebotuwa (n = 170)			Grand Total	%	Jayabodhiya (n = 40)			
		M	F	T	M	F	T	M	F	T	M	F	T			M	F	T	%
01	General Anxiety Disorder	3	4	7	4	4	8	2	3	5	4	5	9	29	5.02	---	2	2	5
02	Agoraphobia	---	1	1	1	2	3	1	2	3	---	1	1	8	1.37	---	1	1	2.5
3	Somata form Disorders	3	4	7	2	2	4	7	4	11	5	8	13	3.5	6.3	---	1	1	2.5
04	Depression	1	---	1	1	1	2	3	2	5	3	4	7	15	2.58	---	---	---	---
05	Psychotic Disorders	2	---	2	2	1	3	7	4	11	9	1	10	26	4.48	---	---	---	---
06	Alcoholism	18	---	18	18	---	18	19	---	19	24	---	24	79	13.62	3	---	---	7.5
	TOTAL	27	9	36	28	10	38	39	15	54	45	19	64	192	33.10	3	4	7	17.5

Table no. 08 : Mental disorders after 10 weeks of the disaster.

No.	Symptom	Kshestraramaya (n=150)			Pothupitiya (n = 120)			Alapatha (n = 150)			Pebotuwa (n = 170)			Grand Total	%	Jayabodhiya (n = 40)			
		M	F	T	M	F	T	M	F	T	M	F	T			M	F	T	%
01	General Anxiety Disorder	3	4	7	4	4	8	2	3	5	4	5	9	29	5.02	---	2	2	5
02	Agoraphobia	---	1	1	1	2	3	1	2	3	---	1	1	8	1.37	---	1	1	2.5
3	Somata form Disorders	3	4	7	2	2	4	7	4	11	5	8	13	3.5	6.3	---	1	1	2.5
04	Depression	1	---	1	1	1	2	3	2	5	3	4	7	15	2.58	---	---	---	---
05	Psychotic Disorders	2	---	2	2	1	3	7	4	11	9	1	10	26	4.48	---	---	---	---
06	Alcoholism	18	---	18	18	---	18	19	---	19	24	---	24	79	13.62	3	---	---	7.5
	TOTAL	27	9	36	28	10	38	39	15	54	45	19	64	192	33.10	3	4	7	17.5

Table no. 08 : Mental disorders after 10 weeks of the disaster.

Analyzing the mental disorders after 12 months of the disaster some important points can be noted.

- During the first month (after the disaster) the percentage of mental disorder of the controlled group was higher than that was of the non-controlled group. But the main representation of this percentage was anxiety related symptoms. After a period of month, the mental disorders percentage of the controlled group noticeably decreased. (77.5 < 17.5 < 12.5). But among the mental disorders the difference between percentages of anxiety was less than other mental disorders. The reason for this was that the controlled group did not face to the real threat of the disaster. But they suffered from anxiety supposing the heavy damage done by the disaster.

- Unlike the international experiences PTSD did not develop with the victims. The surveys done on the tsunami, 2004 also showed that the possibility to develop PTSD was less. According to Ranawaka and Devaraja the PTSD persons among tsunami victims were only 8%; and the vulnerable number to be PTSD was only 7%. (Ranawaka, D.S. & Dewaraja, R. 2006 P.79). However, it is agreeable that further researches are needed to make a final conclusion about this matter.

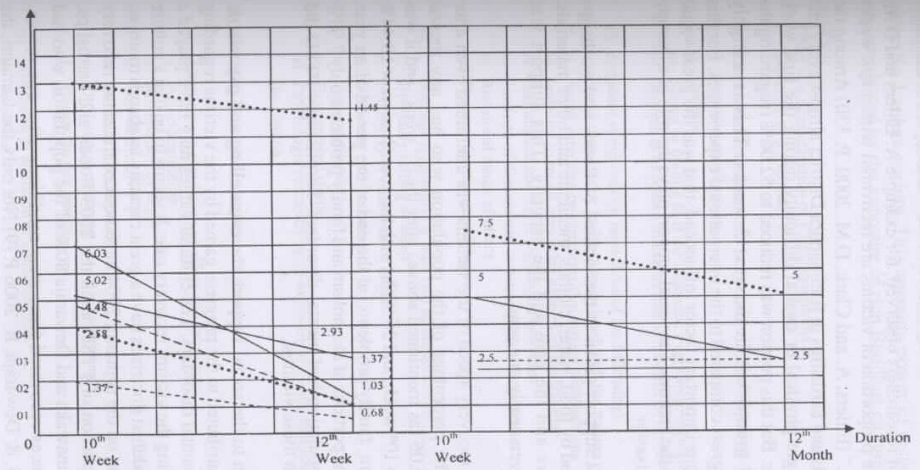
- The female victims showed a higher resistance to post traumatic mental disorders.

- The social support given to the victims played an important role to control the development of post traumatic mental disorders.

No.	Symptom	Kshestraramaya (n=150)			Pothupitiya (n = 120)			Alapatha (n = 140)			Pebotuwa (n = 170)			Grand Total	%	Jayabodhiya (n = 40)			
		M	F	T	M	F	T	M	F	T	M	F	T			M	F	T	%
01	General Anxiety Disorder	2	2	4	1	4	5	1	2	3	1	4	5	17	2.93	---	1	1	2.5
02	Agoraphobia	---	---	---	---	1	1	1	1	2	---	1	1	04	0.68	---	1	1	2.5
03	Somata form Disorders	---	2	2	---	2	2	1	2	3	---	1	1	08	1.37	---	1	1	2.5
04	Depression	---	---	---	---	1	1	1	2	3	1	1	2	06	1.03	---	---	---	---
05	Psychotic Disorders	1	---	1	1	---	1	1	1	2	2	---	2	06	1.03	---	---	---	---
06	Alcoholism	16	---	16	14	---	14	17	---	17	20	---	20	67	11.45	2	---	2	5
07	Family Problems	19	4	23	16	8	24	22	8	30	24	6	30	107	18.44	2	3	5	12.5
	TOTAL	**38**	**06**	**46**	**32**	**16**	**48**	**44**	**16**	**60**	**48**	**12**	**61**	**215**	**36.93**	**04**	**06**	**10**	**25**

Table no. 09 : Mental disorders after 12 months.

Non – Controlled Group Controlled Group



Graph No.05 : Decreasement of mental disorders from 10th week to 12th month

GAD _____ Somata form Disorders _____ Alcoholism xxxxxxxx
Agoraphobia - - - - - - - - - Psychotic Disorders _ _ _ _ _ _ _ Depression xxxxxx

Conclusion

As most of researchers observed, for example A. Ehlers and D.M. Clark, "a sizable proportion of victims are recovered within few weeks or months....." (Ehlers, A. and Clark, D.M. 2000. P. 320) Among the victims of floods and earthslips in Rathnapura District almost every one had at least single physical or mental difficulty during the first week after the disaster. But this portion was reduced to 52.06% (regarding the non-controlled group) within the next 3 weeks. This is a highly appreciable progress compared to the international experiences. For this rapid recovery one important factor influenced; that was the great social support given to the victims. The social support plays the role of a therapy regarding any disaster.

The social support given to the victims of floods and earthslips could be included by food, water, clothes, medicine and other materials; and the shelters and the care and the security. This support was continuously given nearly one year.

The great recovery speed of the victims was continued even after the 3rd week. The percentage of the population who had any mental disorder was 52.06 (as mentioned above) after the 3rd week; and it was 33.10% after the 10th week; and 36.93% (with the contribution of 18.44% of a new problem, family problems) at the end of the period of an year. After reducing the portions of alcoholism and family problems only 7.04% of the victim population had mental disorders. Surprisingly PTSD did not develop with these victims.

In addition to the social support, the counselling and psychiatric services also contributed to the progress gained by the victims regarding post traumatic mental disorders. The cultural values may have played a giant role regarding the victims recovery rate. It seems to be that a culture nourished by Buddhist doctrines have a great capacity to absorb traumas. The surveys done on the tsunami, 2004 have noticed the same recovery speed and low portion of PTSD as in the 2003 floods and earthslips. According to Ranawaka and Dewaraja 80% of the population who had mental disturbances recovered from their conditions after one month. (Ranawaka, D.S. & Dewaraja, R. 2006 P.79) Not only the tsunami, the social calamities faced by the Sri Lankan society in last 3 decades – 1971 insurgency, 1988 – 89 insurgency, civil war after 1983 which

continues to the present – have not managed to break the mental stability of the Sri Lankan society. This amazing power of resistance in people was inculcated by the exposure of rich Buddhist culture.

NOTES

1. DSM – iii Classification of PTSD symptoms.
   - i. Exposure to a traumatic event.
   - ii. Re experiencing symptoms (at least one of the following)
     - i. Intrusive recollection
     - ii. Dreams
     - iii. Acting or feeling as if the traumatic event were recurring
     - iv. Distress at exposure to events that symbolize or resemble trauma.
   - iii. Avoidant symptoms (at least three of the following)
     - i. Avoid thoughts or feelings associated with the trauma
     - ii. Avoid activities or situations that arouse recollections
     - iii. Inability to recall important aspects of the trauma
     - iv. Diminished interest in significant activities
     - v. Feelings of detachment or estrangement from others
     - vi. Restricted range of affect
     - vii. Sense of foreshortened future
   - iv. Arousal symptoms (at least two of the following)
     - i. Difficulty falling as sleep
     - ii. Irritability or outbursts of anger
     - iii. Difficulty concentrating
     - iv. Hypervigilance
     - v. Exaggerated startle
     - vi. Physiologic reactivity upon exposure to events that symbolize or resemble the trauma.
2. The classification of symptoms of desnos.
   - i. Alteration in regulation of affect and impulses.
     - a. Affect regulation
     - b. Modulation of anger
     - c. Self-destructive
     - d. Suicidal preoccupation
     - e. Difficulty modulating sexual involvement
     - f. Excessive risk taking
   - ii. Alteration in attention or consciousness
     - a. Amnesia
     - b. Transient dissociative episodes and depersonalization

iii. Somatization
   a. Digestive system
   b. Chronic pain
   c. Cardiopulmonary symptoms
   d. Conservation symptoms
   e. Sexual symptoms

iv. Alteration in self-perception
   a. Ineffectiveness
   b. Permanent damage
   c. Guilt and responsibility
   d. Shame
   e. Nobody can understand
   f. Minimizing

v. Alterations in Perception of the perpetrator
   a. Adopting distorted beliefs
   b. Idealization of the perpetrator
   c. Preoccupation with hunting perpetrator

vi. Alterations in relations with others
   a. Inability to trust
   b. Revictimizaton
   c. Victimizing others

vii. Alterations in systems of meaning
   a. Despair and hopelessness
   b. Loss of previously sustaining beliefs
   (Herman, J.L. 1992)

3. The percentages of major mental disorders of trauma victims according to Ballenger and others.

Simple phobia	:	29% - 31%
Agora phobia	:	16% - 22%
Major Depression	:	37% - 48%
Bipolar	:	05% - 12%
Mania	:	18%
Social ideation and behaviour	:	20%
Alcohol abuse and dependence	:	28% - 52%

Tables and Graphs

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