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Well-being of Students Affected by Disaster: A Case Study of 2004 Tsunami in Sri Lanka

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Abstract— The main objective of the study was to identify the long-term well-being of students affected by the tsunami of December 2004. The specific aims of the study were to evaluate the psychological, social and educational well-being of students affected by the tsunami, 13 years after the tsunami; and to examine the nature of psycho-social counselling and material support and how these services contributed to their well-being. The methods used to gather data were both quantitative and qualitative with purposive sampling, using the class teachers' nominations. Six school teachers and five counsellors and 43 girls and 42 boys from the Southern Province were enrolled in the study. The results of the study showed how students affected by the tsunami had to face different trauma related experiences such as their family members remaining missing and their family members' death or injury, although the students themselves had escaped the tidal waves. Thus, the trauma related to experiences of the tsunami caused the students to have many psychological and emotional difficulties. The qualitative results showed that the students had reached a quite satisfactory level of well-being, 13 years after the tsunami. The children had attended psycho-social education awareness programs and received psycho-social "training" and counselling interventions. These were implemented in order to successfully develop the students' well-being. The findings suggested that the students required further professional counselling services and welfare facilities within the school system and also a drug prevention program in order to further their well-being, based on a long-term plan.

Keywords— *Well-being, counselling, natural disaster, affected-student*

INTRODUCTION

Natural hazard -induced disasters have existed since the world began and they continue to occur across the world today. They can be divided into various types such as earthquakes, volcanic eruptions, landslides, floods, storms, cyclones, hurricanes, forest and bush fires, droughts, tsunamis and so on. Thousands of human lives have been lost as a result of such disasters. Current interpretations of disasters can be summarized in terms of death rates, numbers of people injured or affected; destruction or dislocation from homes, families, neighborhoods or communities; the economic and social effects of disaster; whether the community is destroyed or irreversibly damaged (Raphael, 1993; Raphael & Newman, 2000). In the years between 1967 and 1991, disasters around the world killed seven million people and affected three billion. During this period, an average 117 million people living in developing countries were affected by disasters each year, as compared to about 700,000 in developed countries (a striking ratio of 166:1) (Cater et al., 1993). Natural hazard -induced disasters occur more often in developing countries than in developed countries (Norris, 2005). The Emergency Events Database (EM-DAT) reported core data about the occurrence of over 22,000 mass disasters in the world from 1900 to present day (EM-DAT, 2020) The Centre for Research on the Epidemiology of Disasters (CRED) stated that in the years 1980 -1999 occurred around 4 212 natural disasters and affected 3.25 billion of people. In years 2000-2019, disasters occurred 7348 and affected 4.03 billion of people (EM-DAT, 2020).

A tsunami is a type of natural hazard -induced disaster; it is a very large wave mainly generated by an undersea earthquake which flows onto the land and causes massive destruction. The Indian Ocean tsunami of 26 December 2004 was one of the most severe disasters of the last several decades. Tsunami waves struck twelve countries in South East Asia. Indonesia, Sri Lanka, India and Thailand were among the worst hit in terms of the extent of widespread destruction, the number of deaths and the number of displaced persons. At least five million people were affected in South-Asian countries. The collective death toll from these countries exceeded 280,000 people and around 1,500,000 people were displaced from their homes (USAID, 2005). Many survivors suffered minor to severe physical injury and psychological and social difficulties. According to the Ministry of Women's Empowerment and Social Welfare (2005), the number of deaths recorded in Sri Lanka exceeded 40,000, while the number of missing persons exceeded 15,000, including children and adolescents. In Sri Lanka, the Sinhalese, Tamils and Muslims were affected. One million people were rendered homeless. 995 children were separated from both parents, while 5000 or more lost one parent, either their mother or father.

The tsunami and its aftermath affected the lives of over 350,000 children in 650 schools in Sri Lanka. Over 182 schools in the coastal belt from north to south were completely destroyed by the tidal waves. In the Matara District, three schools were totally damaged and 9 schools were partially damaged. The MOE estimated that about 25 schools with Advanced Level (A/L) classes were among these. According to the available data, nearly 3500 candidates who had applied to sit the 2005 A/L exam had been affected by the disaster (MOE, 2005).

Disasters effect human life in both the short and long-term and can take a heavy toll on the mental health of those affected, significantly increasing psychological problems and mental disorders. The empirical aspects of the psychological consequences of natural hazard -induced disasters have been studied extensively. Specific emotional and behavioral responses to stress have been observed and studied by mental health professionals in multiple settings, under different circumstances, over time. Disasters usually include multiple stressors that can have different effects on survivors (Norris, 2005; Stevens & Slone, 2005). It is further contended that disasters will lead to the development of psychological symptoms of distress which are in fact, normal human reactions to severely traumatizing life experiences (Mollica et al., 2004). Emotional reactions; fear, isolation, depression, withdrawal, anger and physical complaints or symptoms with no medical basis can occur immediately for weeks, months and years after the traumatic events (Amanda, 2005; Norris, 2002).

Many people affected by the tsunami also recovered in the weeks or months following the disaster but in a significant subgroup the symptoms persist, often for years. It is largely the subgroup of people with persistent PTSD who seek treatment (Ehlers & Clark, 2000). Most were able to cope with their distress while some developed mental disorders such as PTSD, anxiety, depression, social relationship difficulties, inability to concentrate on education and day to day activities (Asarnow et al., 1999; Ehlers & Clark, 2000; Bhushan, 2007; Bolton et al., 2000). Children who have been affected by disaster experience with anxiety, PTSD, and traumatic reactions (Norris, 2002). They also have difficulty in trusting others, feeling isolation, fear, stigma and difficulty in relationships with their peers and family members, together with a decreased interest in social activities, somatic complaints etc (Norris et al., 2002; Hart, 1996). Similar findings have been reported in studies of adolescents (Goenjian et al., 2001; Lipschitz et al., 1999).

Some children have anxieties and bad memories that gradually disappear over time, with emotional support from caregivers and communities. But other children may experience more long-term problems, stress reactions, and PTSD (Yule et al., 2000). Children who used ineffective coping preferences such as social withdrawal, self-criticism and blaming others showed significant levels of PTSD (Russoniello et al., 2002). Many research findings have shown that in the absence of effective coping, the meaning and impact of traumatic events may continue to play a role in the personality and psychological development of children (Huzziff & Ronan, 1999).

Millions of people have been directly affected by the tsunami and the proportion of child survivors is especially troubling since children generally exhibit more severe distress after disasters than adults do (Stevens & Slone, 2005). In the tsunami study with children in India the catastrophic experience was causing emotional distress to the subjects after the passage of a year (Bhushan, 2007). There is also evidence suggesting that girls initially report more PTSD symptoms than boys, following natural disasters (e.g., Green et al., 1991; Lonigan et al., 1998; Shannon et al., 1994; Vernberg et al., 1996). The tsunami study showed that the girls had 10% in the mild category, compared with 20% for the boys; but 54% of the girls fell into the moderate category, whereas only 41% of boys were at that level (Dissanayake, 2006).

It is important to investigate the long-term psychological well-being of children and adolescents affected by the tsunami. Similar ideas drawn by Witruk et al. (2005 & 2008) stated that in terms of psychological help, children affected by the tsunami need counselling and related activities such as cognitive-behavior therapy, art therapy (painting), art work, storytelling, imagination of a safe place exercise, and yoga exercises to help them to express their emotions, feelings and to reduce symptoms of anxiety and PTSD. Children with multiple losses and greater environmental chaos are in greater need of intervention (Russoniello et al., 2002).

Objectives of the Study

The main objectives of the study were to identify the long-term psychological, social and educational well-being of the students, post tsunami; to identify the loss aspects and psychological and emotional difficulties and to examine the nature of psycho-social counselling and material support and how these helped in the students' well-being.

METHOD

The author has done Doctoral study with tsunami affected children and their psychological problems and therapeutic intervention in 2007-2009, University of Leipzig, Germany and another study was done in 2014 which was the tsunami affected children's long-term psychological problems and trauma therapy with painting and coping in Matara District in Southern Province in Sri Lanka. As the long-term tsunami research experiences by the author recognized the students' have remained psychological and social issues though the MOE and non-governmental institutions provided different facilities and support for their adjustment. Accordingly, this study conducted in the year 2017 to evaluate children's well-being in psychological, social and education after thirteen years of the tsunami and to examine of psycho-social counselling and material support and how these services contributed their well-being and for this study done with two districts in Southern Province in Sri Lanka as following the figure 1.

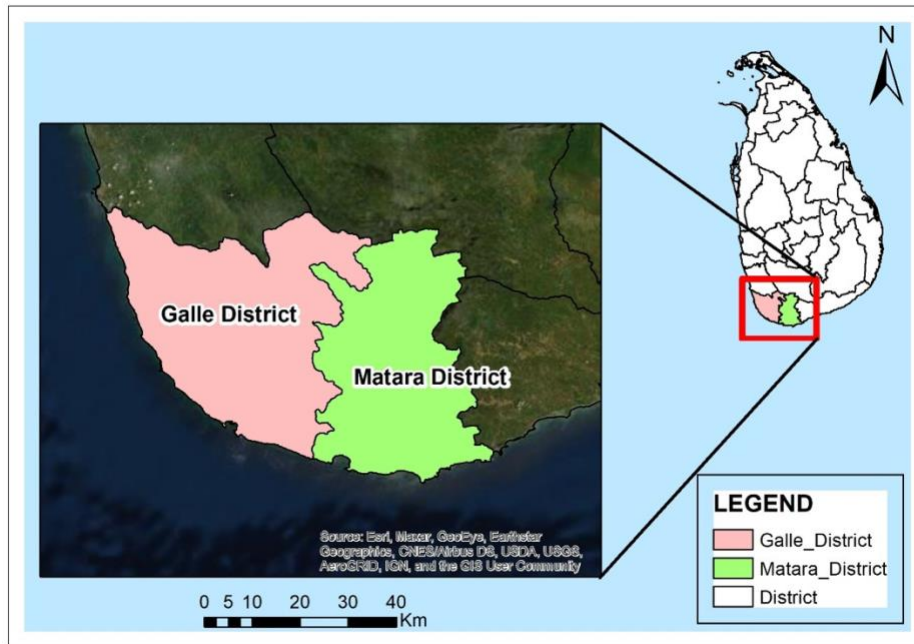


Figure 1. Study Area: Southern Province in Sri Lanka.

The study uses a sample survey methodology. A quantitative and qualitative approach was used in the research process, to gather field data. The participants were selected using purposive sampling methods. Accordingly, eighty-five students affected by the tsunami were selected. The student sample was selected from two schools in Galle and three schools in the Matara District, in close proximity to the ocean. The sample students were aged from 15-18 years old after the thirteen years of the tsunami. Six class teachers and five counselling teachers were selected using purposive sampling methods for the interviews and they helped initially to identify children affected by the tsunami for this study, inclusion of the following factors: being caught in the tidal waves, the loss or injury of family members, the loss or death of friends, children who were injured, children who cannot concentrate on schoolwork and children who are absent from school and those who have suffered the loss of their homes and household things. Other issues discussed included the questions of children who lived in refugee settlements and those who lived with guardians or with family. The student sample included both genders: 43 (or 51%) were girls and 42 (or 49%) were boys, living 1 to 2 km distance from the sea.

Instruments

Two instruments were utilized to gather research information. A screening questionnaire and focus group discussion were employed for the study. The questionnaire consisted mainly of two sections: information regarding experiences relating to the tsunami, including physical damage, loss of family members and friends, injuries, lost items etc while the second section used the emotional section of the Health Cube questionnaire (Stueck,2017) which was selected to measure emotional difficulties. A qualitative approach was utilized through focus group discussions and case studies, in order to get further in-depth understanding and clarification about the students' well-being and education in post-tsunami settings. Five focus group discussions were carried out with the participation of 45 students—with 9 students per group. A class teacher was selected for each classroom; altogether six teachers from both districts and five counsellors were included for the interviews in each school.

Each school had a class teacher who facilitated the research data collection exercise, informed the children of their selection for this research and got permission from their carers for them to participate in the study. Besides that, permission was also received for their participation in the questionnaires. They were assured of anonymity and confidentiality. Meanwhile, the class teachers arranged meetings for the children's parents and guardians or caregivers to discuss the nature of the program. The children were informed that the researcher of the study would be arriving on the given date and time for every sample school, with prior permission from the Provincial Secretary and the Divisional and Zonal Directors of Education, who were the educational administrative officers with whose authority the principal gave permission for the study to take place. The focus group discussions were audio recorded with prior permission from the sample group. The findings were analyzed with percentages, chi-square and content analysis with a few case studies.

RESULT AND DISCUSSION

Impact on Students, after the Tsunami

The results of the study consisted of two aspects; quantitative and qualitative. The children were asked several questions to verify the severity of experience, 13 years after the tsunami. The students described their current living status after the tsunami in Table 1.

Table 1. Present Living Conditions.

Present Living Conditions and Parents Living Status	N (85)	%
Rebuilt houses	32	38
New houses	53	62
Refugee camp	00	00
Parent's living status		
Both parents living together	51	60
Divorced after the tsunami	3	4
Separation from the family	4	5
Both parents died	9	11
Single parent	18	21

Table 1 presented that 38% of the students lived in houses that were substantially rebuilt after the tsunami. 62% lived in new houses awarded by the government or non-government institutions and this was the highest score. There were no children living in refugee camps. The study also examined the living conditions of the children's parents, after the tsunami and whether the parents were dead, missing, divorced, separated or living together. 60% had both parents living together, 4% were divorced after the tsunami and 5% indicated separation from the family. 11% had both parents died during the tsunami.

Table 2. Student's Tsunami Experiences.

Student's tsunami experiences	N (85)	%	No	%
Family members died during the tsunami	28	33	57	67
Injured	49	57	36	43
Missing family members	14	17	71	83
Friends died during the tsunami	34	40	51	60
Caught and escaped the tidal wave	44	52	41	48

Based on Table 2. students presented different tsunami-related experiences. Regarding the issue: 'A family member had died during the tsunami', 33% responded 'Yes' and 67% responded 'No'. Regarding the issue: 'Injured family members', 57% of the sample responded 'Yes'. Regarding the issue: 'Members of the family are missing' 17% responded 'Yes' while 83% responded 'No'. Regarding the issue: 'Loss of their friends', 40% of the sample responded 'Yes', while 60% said 'No'. Regarding the issue: 'Students' experienced traumatic incidents and escaped the tidal wave', 52% said 'Yes' while 48% responded 'No'.

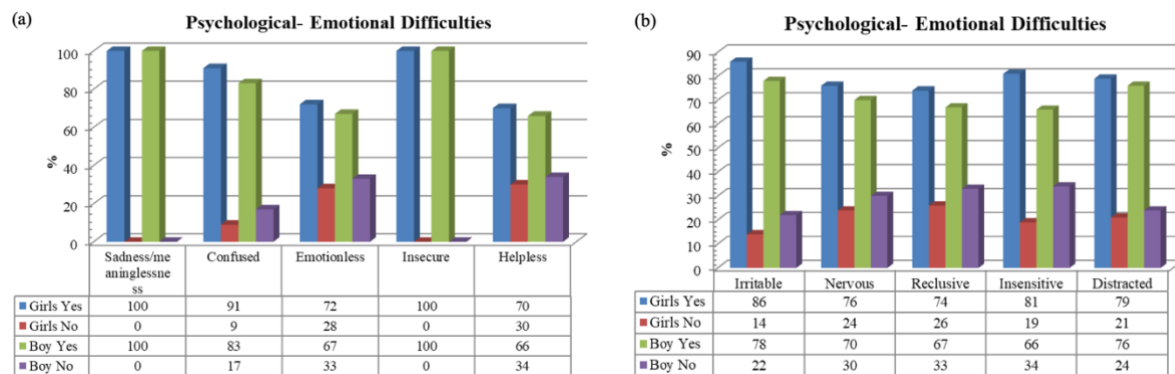


Figure 2. (a) and (b) Student's Psychological- Emotional Difficulties.

The results revealed that the emotions of the students affected by the tsunami have changed negatively. Figure 2 (a) and (b) depict the emotional difficulties that the students encountered. In both groups, the girls and boys presented higher scores for emotional difficulties. Both groups indicated sadness and insecurity at 100% which were the highest scores in the sample, in contrast to the other emotional difficulties mentioned. The chi-square test also proved that both groups have emotional difficulties and that there were no significant differences between the groups.

In both groups, the categories of 'Confused' and 'Irritable' were in second and third positions. 91% of the girls and 83% of the boys responded 'Yes' to the category 'Confused'. The chi-square test showed that there were no significant differences, indicating that both girls and boys who were affected by the tsunami had experienced trauma. ($\chi^2 = 1.816, p=.178$). 86% of the girls and 78% of the boys responded 'Yes' the category of 'Irritable' and there was no difference between the groups with regard to the emotion category of 'Irritable' ($\chi^2 = 1.371, p=.190$). 72% of the girls and 67% of the boys responded 'Yes' to the category of 'Emotionless'. 70% of the girls and 66% of the boys responded 'Yes' to the category of 'Helpless'. The emotional category of 'Distracted' was also shown to be at a higher level in both groups. Students affected by the tsunami had experienced trauma related to these emotional difficulties. The findings are in line with Shannon et al. (1994), Norris et al. (2002), and Yule et al. (2000).

Traumatic Emotion

The focus group discussion findings showed that participants reported on how the disaster disrupted family relationships, the social fabric and mental conditions of people in the affected communities. The findings also showed the ways in which the students themselves dealt with the stresses and strains they encountered. The students' tsunami experiences can be summarized. "Participants reported fear, fear of bad memories, being astonished and surprised, living with frustration and tension, spending time in sadness, having excessive worry

and living in grief because they were separated from their parents. Children had a poor understanding of emotional regulation, saying “I feel confused and cannot remember things”, “*I have difficulty trusting others*” and “*I feel isolation and stigma from society, being called ‘poor child’ and ‘orphanage child’*” These findings are in line with the Psychological studies conducted by Hart in Sri Lanka (1996) reporting on the loss of the relationship with family members and how it affects children’s lives. Hence, children were reported to be sad, living with worried feelings and frustration, attempting to isolate themselves and feeling anxiety and stress— further in line with studies by Amanda (2005), Norris (2002), and Bhushan (2007).

Behavioral/physiological effects

62 students (or 73%) reported symptoms such as insomnia, loss of appetite, lost hobbies and headaches in the aftermath of the tsunami. All the students reported ‘*Running to safe places because of false tsunami alarms by other people*’. These incidents also caused them to re-traumatize during periods when they were temporarily staying at the temple or in small huts, from two weeks to several months. Students commented: “*What is going to happen to me now?*”, “*Negative mood*”, “*Why did this happen to us?*”. They withdrew from society, found it difficult to concentrate on day-to-day activities and their anxieties and concerns interfered with their ability to pay attention and concentrate, leading to difficulties with their schoolwork. 10 students described engaging in risk-taking behaviors, being at increased risk for alcohol or drug misuse and stealing school items from their peers, due to the long-term effects of disaster. Teachers have also shown that some children were aggressive in the classroom and stealing items from others, withdrawing from their peers and being willing to stay in isolation. These findings are in line with Shannon et al. (1994), Norris (2002), and Mollica et al. (2004).

Hypersensitivity to change and stress

In the aftermath of the tsunami, children had to live in temporary housing. As a result of this, they had to eat new kinds of food which they were not used to eating and they had to wear different types of clothing. Students also described how many people suffered from fever, wounds and chest pains at the temporary residences. Many survivors suffered minor to severe physical injuries. Students described their traumatic experiences in the aftermath of the tsunami, differently.

A case study is reported as follows, describing the traumatic experiences and how well-being was achieved: “*I was 5 years old when the tsunami attacked our village. The tsunami brought fear due to bad memories. I lost both my parents and my sister was missing in the horrific incident. I re-experienced the event as if it was not happening in the present. Earlier I could not get sleep because of the flashbacks and many times I was running away during the night with my storybooks, to escape from the tidal wave as if it was coming again. I am not very much interested in hobbies and I don’t want to make relationships with my friends and neighbors.*” This continued for 3 years post-tsunami. The child further explained that he had received medicine and counselling from the psychiatric doctor and that he is now living well and doing his schoolwork. This was stated by an 18-year-old boy in the Advanced Level (senior secondary class) at a school in Matara, close to the coast.

Well-being and Education

All participants felt that living in a secure/safe environment without fear and threats is an important aspect of their well-being. Both groups of girls and boys that were involved in this study had a significant reduction in their sense of insecurity two years after the tsunami. Previously, the children had experiences with false tsunami

alarms and as a result of this they had to stay in temporary huts, without their parents or caregivers. After the establishment of tsunami alarms and disaster management units in their living area and after the schools' committees were established by the MOE and the government, the children described their sense of well-being and the feeling that they were safe and protected. Participants explained that they received psycho-social education on how to behave in an emergency situation (like disasters); a center for disaster management was established in each school; training in how to face an emergency was provided by teachers and the army, and "training on how to face tsunami, if it occurs again, and how to respond to tsunami alarms". The students of one school reported training on how to face the tsunami (e.g., going to the 3rd floor of the school building) and students also learned about how tsunamis occur. After thirteen years the student survivors of the tsunami no longer felt constrained by their experiences.

The teachers in the schools included in the study sample—particularly in the primary classes of grade 4, 5 and 6—described how they had difficulties in handling the children who had psychological issues, to include them in social activities and motivate them to participate in educational activities, after the tsunami. The teachers described how the greatest difficulties arose when trying to orient traumatized students toward a successful learning pattern and to regaining educational parity with non-traumatized peers. The immediate results were that some of the children who had lost both parents dropped out from education. One of the teachers described the students' experiences at Pereliya Sri Jinarathna School, recounting a story of the tsunami and recovery after the disaster.

Most of the children did not want to study because of bad memories, grief and feeling that their lives were unsafe. A few of them abandoned school; some children did not attend school for 3-4 and 6 months but the children who came to school were out of school uniform. Somehow, two years after the tsunami, most children were able to safely come to school. "One of the children also suffered lot of difficulties—fear, insomnia, spending time in sadness and grief and he was very uncomfortable to continue the education process in such a manner. School was conducted in a small temporary hut and the temple after the tsunami. Evening classes were held and the teachers sacrificed a lot. Two years after the tsunami, they received lots of facilities for education—the school was fully re-built by the government of Italy, and non-government agencies provided stationery items. Extra classes were held for the students. Students started liking school and liking education. Finally, the teacher mentioned that a student passed the O/Levels well, and did commerce for A/Levels and was selected for university."

As a result of the tsunami, many survivors suffered minor to severe social relationship problems. The tsunami caused a lot of internal displacement and disrupted family relationships as well. "Some of the key points of social well-being for children affected by the tsunami included their aspiration to get a good education and the material resources required for education in a good environment, as well as the desire for unity and cooperation within their community and schools". Students reported that interventions by governmental or non-governmental agencies had improved their community relationships and cooperation and their livelihoods, they received temporary and permanent houses through foreign aid in different geographical areas. Thus, people became more united than before; they had a good awareness about society and strong relationships with neighbors. Teachers became closer to their students and they all adjusted to the new community.

Good health and a good education are considered essential for well-being. The students reported that interventions by governmental or non-governmental agencies had improved their education. Education was not successful in the first three years after the tsunami. However, due to the reduction of tension relating to the tsunami, education programs now take place effectively. The schools were built to withstand damage from any future occurrence of a tsunami. The students' performance gradually improved. By mid-semester of 2014, all the students had scored 50-85 marks and over 50 marks in most of their subjects (e.g., Sinhala, Commerce, History, Health Science, Civics, Aesthetics, Geography and Buddhism). But most of the students scored 40-50, or 30-50 for Mathematics, Science and English. After a period of suspension, education became more developed and students were able to pass the General Ordinary Level (O/L) exam. Of these, one senior student was able to enter university and some students progressed to the extent that they were able to follow computer courses. The school teachers helped the students a lot in their education with preparations for the O/ L examination. They started classes in school early in the morning and after school and also conducted seminars. It was reported that the education process and the students' mindsets have developed well over the past 13 years, since the tsunami. One teacher from the Matara School described a success story:

This is the story of a 16-year-old boy in grade 11. He was 7 years old when the tsunami occurred and, in the aftermath, he experienced a great deal of fear due to bad memories, because both his parents had died. A doctor diagnosed him to be suffering from a moderate level of traumatic stress, due to the tsunami. This is known as post-traumatic stress (PTSD) and the symptoms were insomnia at night and being re-traumatized: feeling that the tsunami will come again and trying to run away, not having any hobbies and losing his relationships with friends and neighbors. Finally, he was taken for psychiatric treatment to a counselor. After one or two years of continuous treatment the student was cured. All his school teachers were concerned about his behavior and supported him in finding success in his education. Now he is a well-adjusted young boy and he took his O/L examination. The teachers are confident that this student could achieve 9 "A" passes.

Coping strategies and well-being: Focus group discussion findings further indicated the different coping strategies adopted by students, including for example, the role of religion and the part played by external agencies in supporting and helping them to recover their physical and mental well-being, a sense of security, material welfare and educational well-being. The sample students highlighted how they practiced their religious activities. Twenty students described praying, doing chants at home every day and in the case of those who lost their family members, praying for "Nibbana" that is the highest spiritual state and the ultimate goal of Buddhism. Twenty-five students described praying on behalf of their lost family members when participating in special religious activities. Annually, on the day that the tsunami occurred, each household gives alms in remembrance of lost family members, praying that it should never happen again to their family. Some students described a monthly alms-giving to the temple in memory of their lost family members, and praying that they should attain "Nibbana". Eight students in the sample described giving food items and other necessary stuff to adults and children's orphanages on the 24th of December, annually.

Through these practices' students healed their pain and coped with traumatic memories. The students use different coping mechanisms to deal with their memories of the tsunami, like distraction, for example watching television to forget the tsunami; and avoidance, for example avoiding television programs about the sea and trying not to think or talk about the tsunami; and seeking social support, for example trying to get advice from

someone about what to do; turning to religion, engaging in religious activities such as going to the temple, chanting stanzas and praying for God's help to try and forget the tsunami; and finding something to do, like playing, watching television or reading books to try and forget the tsunami and wishing it had never happened.

They also used emotional regulation, for example trying to calm themselves down; and social withdrawal-trying to be on their own and away from others. They also used problem-focused coping, trying to sort things out by doing something about it and obtaining information in order to think of a solution to the problem. The students described getting support from their peers, neighbors and relations when they had emotional difficulties. They further highlighted how they frequently used coping mechanisms in the early stages of the tsunami experience, in contrast to their experiences 13 years later. The cultural context including the concepts of family systems, family relationships, religion and neighborhood remained powerful in providing support to the affected children. These findings are in line with studies done by Dissanayake (2006).

Psycho-Social Support and Counselling

Students, teachers and counsellors were asked about the nature of their social support and counselling and how those methods supported them in decreasing the trauma related to experiences of the tsunami. The teachers explained that UNICEF has introduced 'psycho-social services and counselling centers to the MOE and these were established in each provincial education office, after the tsunami. Previously, the students' support services were focused on Guidance and Counselling activities for students affected by the tsunami. Master Counsellors were trained as trainers (TOTs) for 20 days at the National Institute of Education using manuals on psychology, education and career counselling'. School counsellors also described how they had received facilities to work with children affected by the tsunami. They received training to support them in dealing with the students' problems and were provided activity books by UNICEF. A 'Disaster Mitigation Education System' was established and training programs were implemented, i.e.: 'Trauma Counselling' psycho-social education programs, and disaster prevention and disaster management. School counsellors were close to the students and therefore the students were able to resolve their problems by discussing them with their teachers. Some of these problems included educational matters, difficult lessons which were well explained again by the teachers, financial matters, problems with friends and other personal issues.

Counsellors and teachers were received various forms of 'training' in psycho-social intervention from the non – governmental agencies together with the MOE. These included art therapy, painting therapy, music therapy, yoga, relaxation techniques, counselling skills and the safe place exercise, to decrease the children's trauma and fear. After the mediator training program, the affected children have received various forms of psycho-social support from teachers and counselling professionals. The students were given opportunities for free play in the playground after school hours (from 4.30 to 6pm). Play activities included football, volley ball, cricket, carrom and badminton for which equipment was were provided by UNICEF. They also sometimes played traditional games of their own choice in groups. Small kids were provided with toys for free play.

Students in the temporary schools set up in each district were psychologically supported by the master counsellors through various play-way methods, including WIN-WIN games, theatre forums, music therapy and the artistic expression of trauma emotions. Some of the emotive methods adapted in the trauma therapy were dance, music, singing, storytelling, writing poetry, drawing (to express emotions which are too difficult to

express verbally) and theatre (performing art and drama where the children have the freedom to act out their emotions under the guise of being someone or something else). These techniques were found to be useful for the children who were unable to express their thoughts or emotions verbally, as they needed a medium through which to externalize their inner feelings. The establishment of recreational parks also helped the children to engage in leisure activities. General counselling techniques and a strongly established referral system would help the more specialized groups of affected children. Whenever the teachers find that the students' needs exceed the capacities of the existing counselling service, he/she should be ready to refer them to specialized services; either to the psychiatrist, senior counsellor or others who are experts in the field. At the provincial level, master counsellors and counselling instructors conduct prevention programs, educational workshops for attitude change and the development of social skills, leadership workshops and awareness programs on how to protect children and prevent child abuse etc. However, this psycho-social support and counselling is conducted on a short-term basis only and is not a long-term effort. Researcher has granted permission from the schools' counsellors and authorities, to assured of anonymity and confidentiality of the sample personal information. Accordingly, findings of the present study are realized to have further enormous importance for therapeutic intervention for students and for developing mediator training program for school counsellors. It is paramount to conduct training program for school counselors' in long-term and large scale. The present study only focused on children of the one ethnic group, the Sinhalese, it is not be representative of other ethnic groups such as Muslims and Tamils. Thus, it limits itself for purposes of comparison the generalization of findings as Sri Lanka is a multicultural and multilingual society, as well as across gender differences in certain psychosocial problems, wellbeing and training effects. Therefore, it would be far better to evaluate separately.

CONCLUSION

The students in the sample had gradually achieved significantly high scores in their education, several years after the tsunami, in contrast to the two-year period after the event. Loss aspects included experiences of property destruction, loss of family members, family members being injured or missing, and missing friends all contributed towards their psychological/emotional difficulties including feelings such as sadness, insecurity, helplessness, irritability, reclusiveness, mistrust, fearfulness and nervousness. The students received different types of psycho-social support, counselling and psychiatric medical treatment after the disaster. Students had achieved psychological well-being and emotional difficulties were decreased after the thirteen years of the tsunami quite satisfactory. As the consequences of psychosocial training programs, students reached social well-being quite satisfactory that means they were adjusted to new society. Although, the students have easy access to alcohol and drugs due to the high prevalence of these substances in these areas.

For long-term planning, the students require a professional counsellor's service in the school, in order to further reduce their trauma and other psychological issues. A further long-term prevention program is required to deal with issues such as substance abuse. The students received the benefit of short-term programs within two to four years after the tsunami. The government and MOE had planned long-term programs though not all have actually taken place. Traumatic experiences may affect individuals for years. Thus, the affected students need access to multi-decade programs in the long-term. In most cases, the funding and support are in place until the next disaster occurs, somewhere else.

REFERENCES

- Amanda, S. (2005). *After the earthquake is psychological disaster*. El. Salvador: MSF press office.
- Asarnow, J., Glynn S., Pynoos, R. S., Nahum, J., Guthrie, D., Cantwell, D.P., Franklin, B. (1999). When the earth stops shaking: earthquake squeal among children diagnosed for pre-earthquake psychopathology. *Journal American Academic Child Adolescents Psychiatry*, 8, 1016-1023.
- Bhushan, B. (2007). Emotional Distress and Posttraumatic Stress in Children Surviving the 2004 Tsunami. *Journal of Loss and Trauma*, 12, 245-257.
- Bolton, D., O'Ryan, D., Udwin, O., Boyle, S., & Yule, W. (2000). The long-term psychological effects of a disaster experienced in adolescence: II: General psychopathology. *Journal of Child Psychology & Psychiatry*, 41(4), 513-523.
- Cater, N., Revel, J., Spair, D., & Walker, P. (1993). *World disasters report 1993*, Geneva: The International Federation of Red Cross (IFRC) and Red Crescent Societies (RCS).
- Dissanayake, G. R. K., (2006, January). *Post-traumatic Stress and Coping following a Disaster*. Paper presented at the International Workshop Institute of Psychology II, University of Leipzig; Leipzig.
- Ehlers, A., & Clark, D. M. (2000). A cognitive model of posttraumatic stress disorder *Behavior research and therapy*, 38, 319-345.
- EM-DAT (2020). The International Disaster Database. *Centre for Research on the Epidemiology of Disasters – CRED*. [http://: www emdat.de](http://www.emdat.de)
- Goenjian, A.K., Molina, L., Steinberg, A.M., Fairbanks, L.A., Alvarez, M.L., Goenjian, H.A., & Pynoos, R.S. (2001). Posttraumatic stress and depressive reactions among Nicaraguan adolescents after hurricane Mitch. *American Journal of Psychiatry*, 158, 788-794.
- Green, B.L., Korol, M., Grace, M.C., Vary, M.J., Leonard, A.C., Gleser, G.C., & Smitson-Cohen S. (1991). Children and disaster: age, gender, and parental effects on PTSD symptoms. *Journal of American Academy of Child and Adolescent Psychiatry*, 30 (6,) 945-951.
- Hart, J. (1996). *Armed conflict in Sri Lanka*. Refuge Studies Centre: Oxford University.
- Huzziff, A. K., & Ronan, R. K. (1999). Post-Trauma Coping: Prediction of Children's coping Following a Natural Disaster- the Mount Ruapehu Eruptions: A prospective study. *The Australasian Journal of Disaster and Trauma Studies*. 1, 1-20. Massey University: New Zealand.
- Lonigan, C. J, Anthony, J.L., Shannon, M.P. (1998). Diagnostic efficacy of posttraumatic symptoms in children exposed to disaster. *Journal of clinical Child psychology*, 27 (3), 255.267
- Lipschitz, D. S., Winegar, R. K., Hartnick, E., Foote, B., & Southwick, S. M. (1999). Posttraumatic Stress Disorder in Hospitalized Adolescents: Psychiatric Comorbidity and Clinical Correlates. *Journal of American Academy of Child and Adolescent Psychiatry*, 38, 385-392.
- Ministry of Women's and Empowerment and Social Welfare. (28 January 2005). *South-East Asia Earthquake and Tsunami-Sri Lanka*. Retrieved from http://www.searo.who.int/EN/Section23/Section1865_8668.htm
- Ministry of Education. (2005). *Post Tsunami Sri Lanka*. Retrieved from <http://www2.asialink.unimelb.edu.au/cpp/transcripts/pdf/educationreform.pdf>
- Mollica, R. F. M. C., Donald, L. S., Massagli, M. P., & Silove, D.M. (2004). *Measuring Trauma Measuring Torture. Case study of instrument adaptation (1995) The Invisible Human Crisis: Mental Health Recommendations for the care of persons evacuated and Displaced by the Handshi-Awaji (Kobe) Japan Earthquake*: Harvard Programme in Refugee trauma.
- Norris, F. H. (2002). Psychosocial consequences of disasters. *PTSD Research Quarterly*, 13, 1-3.
- Norris, F. H., Matthew J. F., Patricia J. W., Christopher M. B., Eolia D., & Krzysztof, K. (2002). Sixty thousand Disaster Victims Speak: Part I. An Empirical Review of the Empirical Literature, 1981-2001. *Psychiatry*, 65(3), 207-239.
- Norris, F. H. (2005). *Psychosocial consequences of natural disasters in developing countries: What does past research tell us about the potential effects of the 2004 tsunami?* A National Center for PTSD Fact Sheet. Retrieved from http://www.ncptsd.va.gov/facts/disasters/fs_tsunami_research.htm.

- Raphael, B. (1993). *Disaster Management*. National Health and Medical Research Council publication, Canberra: Australian Government publishing Service.
- Raphael, B. & Newman, L. (2000). *Disaster Mental Health Response Handbook*. Nswhealth.
- Russoniello, C.V., Skal, T.H., O' Brien, K., McGhee, S.A., Bingham- Alexander, D., & Beatly, J. (2002). Childhood posttraumatic stress disorder and efforts to cope after Hurricane Floyd. *Behavioural Medicine*, 1-8.
- Shannon, M.P., Lonigan, C.J., Finch, A.J. J., & Taylor, C.M. (1994). Children exposed to disaster: I. Epidemiology of post-traumatic symptoms and symptom profiles. *Journal of American Academy Child Adolescents Psychiatry*, 33(1), 80-93.
- Stueck, M. (2017). *Health Cube Survey*. Biocentric Disaster and Health Management. DPFA. Germany.
- Stevens, S., & Slone, L. (2005). *The tsunami and mental health: What can we expect? A National Center for PTSD Fact Sheet*. Retrieved from http://www.ncptsd.va.gov/facts/disasters/fs_tsunami_Mental_Health.html.
- Vernberg, E. M., La Greca, A.M., Silverman, W.K., & Prinstein, M.J. (1996). Prediction of posttraumatic stress symptoms in children after Hurricane Andrew. *Journal of Abnormal Psychology*, 105 (2), 237-248.
- USAID. (2005). *Fact sheet 38, fiscal year 2005*, May 6. Retrieved from http://www.usaid.gov/our_work/humanitarian_assistance/disaster_assistance/countires/indian_ocean/fy2005/indianocean_et_fs38_05-06-2005.pdf.
- United Nations International Children's Emergency Fund (UNICEF) (2005). *Tsunami disaster-countries in crisis- Sri Lanka: A long-term commitment to Sri Lanka's school children*. Retrieved from http://www.unicef.org/emerg/disasternasia/24615_24955.html.
- Witruk, E., Reschke, K., & Stueck, M. (2005) *Psychological First Aid disaster affected people*. Paper presented at the meeting of university of Colombo. Sri Lanka.
- Witruk, E., Reschke, K., & Stueck, M. (2008). Psychological Stress among Emergency Helpers-Psychological First Aid for victims affected by the Tsunami disaster in Sri Lanka and Indonesia. *Trauma und Gewalt*, 3, 196-207.
- Yule, W., Bolton,D., Udwin,O., Boyle, S.,O'Ryan,D., & Nurrish, J. (2000). The long-term psychological effects of a disaster experiences in adolescence: The incidence and course of PTSD. *Journal of Child Psychology and Psychiatry*, 41, 503-511.