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Psycho-social Problems of Adolescents Affected in the Flood Disaster Area of Dire Dawa City

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ACRONYMS

ASD:-Acute Stress Disorder

DAC:-Disaster Affected Children

DA: - Disaster affected

DMHRH:-Disaster Mental Health Response Handbook

DPPA:-Disaster Prevention and Preparedness Agency

DSM:-Diagnostic and Statically Manual of Mental disorders

EMA:-Emergency Management Australia

PTSD:-Post Traumatic Stress Disorder

SES:-Socio Economic Status

Abstract

During and after flooding disasters, pediatricians, religious people, etc. Can assist parents and community leaders not only by accommodating the unique needs of adolescents but also by being cognizant of the psycho- social responses of adolescents to reduce the possibility of long-term psychological morbidity. The effect of disaster on adolescents are mediated by many factors including personal experience, parental reaction, developmental competency, gender and the stage of disaster response .Pediatricians can be effective advocates for the child ;family and at the community level and can affect national policy in support of families. In this research, specific adolescent responses are delineated; risk factors for adverse reaction are discussed to ameliorate the effects of disaster on adolescents.

This article presents a review of a number of studies involving disaster victims and workers in other cultures and presents information about cross-cultural aspects of grief.

It discusses some general methods and approaches that disaster mental health professionals should consider when contemplating providing disaster mental health services outside of their own culture. Emphasis is made that collaboration with provides and/or "cultural-brokers" from the culture should be sought. Most common findings for those affected by flood were the most symptoms of victims were those associated with PTSD, depression, and anxiety disorders. Understanding the role of families is discussed as well as effects of flood on adolescents. The research and literature shows PTSD, Anxious/obsessive, Delinquent, Frustration, Cruelty, Somatic complaint, Aggressiveness, in both males and females. Sensitivity in dealing with grief rituals across cultures is presented.

The development of a disaster mental health model with a strong emphasis on cross-cultural factors, consultation, collaboration, and education is suggested as a method to help mitigate and plan appropriate responses to disaster related mental health responses and problems.

Chapter One

1 *Introduction*

1.1 Background

The pacific river that used to pass through Diredawa Dechatu and Ashewa meda area burst its bank in the evening and caught the dwellers on July 05, 2006 unaware. A detailed description of the setting as presented by various National and International Medias, T.V and radio programs and news papers is so touching and highly pathetic. That day was so cursed a night for the people of that town. The fact that it was night embitters the crisis. It was impossible to figure out the orientations of the flood and to flee to areas of less risk if, after all, the deluge gives them time to run for life. The details are so heart breaking, for example father told in a T.V screen that he had lost six of his family members. Most survivors have lost their loved ones, fathers', mothers, children, brothers, sisters and others. The raging flood had washed their houses, and belongings. They could hardly locate where their houses were as the whole village has been destroyed by flood. None of them could imagine that a catastrophe of such nature in hours would rob them of what they had invested for years. The fact that the survivors lost their families in the most tragic way gives them a hard time to control their emotions. The Disaster Prevention and Preparedness Agency in its flash appeal indicated that in Dire Dawa the heavy rain in the highlands of east Harar zone caused Flash Flood from the overflow of Dechatu dry season stream. The flash flood killed 256 people; displaced 9,000 others and destroyed properties worth over 27 million birr. (The Ethiopian Herald, September 10, 2006).

The city's Landscape is disfigured as the deluge continued to sweep away eroding sand and soil everything in its course. Uprooting trees, demolishing buildings and swallowing people and animals. It was virtually impossible to ransacking all through the sand pile, which stretches in kilometers to search for dead bodies.

The flood caused tragic losses and left wounding memories on the residents and survivors. The risk of rehabilitating the victims is a chilling task that requires the generous support of NGOs Government and the society.

We all are aware of the staggering scope of the destruction of disaster in Dire Dawa and South Omo. The flood caused confusion, chaos.. Many children are dead and orphaned. The flood has severely affected their psychological well-being. Faced with the over whelming knowledge of this vast devastation, it is natural to wonder how the survivors will cope the extent to which they are at risk for psychological problems and how they can be helped. Children will be frightened by the disaster itself or be upset by disruption that a disaster might cause in their daily routines of their relationships with parents, relatives, friends etc. It is usual for children to show changes in behaviors that are signs following a disaster.

Early reports were of a tsunami that has killed thousands of people, whole towns, and villages have been wiped off the cost of Indonesia –As the result of this disaster many people developed psychological disorders such as major depression, generalized anxiety, and post-traumatic stress disorders. Many more experienced non-specific distress, somatic complaints and other medical health conditions. If the rate of psychological problems turns out to be similar to previous severe natural disasters studied. (E.g. Armenian earthquake, mudslides in Mexico, Hurricane Andrew in the United States), 50% or more of those affected could suffer from clinically significant distress or psychopathology ((Slone, 2005).

It is important to help survivors recognize the normality of most stress reactions to disaster. Although stress reactions may seem extreme and cause distress, they generally do not become chronic problems; most people recover fully from even moderate stress reactions within 6 to 16 months. (Baum and Fleming, 1993; Green et, al., 1994)

Many survivors of the 1974 Tornado in Xenca, Ohio, experienced psychological distresses, the majority described positive out comes: they learned that they could handle crisis effectively, and felt that they were better off for having met this type of challenges (Quararantelli,1995) Disasters may also bring a community closer together, reorient an individual to new priorities, goals or values. For this reason, the concept has been referred to as "post traumatic growth" by some authors (See, Calhoun, 2000) and is similar to the benefited response reported in the combat trauma literature (Ursine et, al., 1996)

Young children may be especially affected during these times because of their sense of vulnerability, their lack of understanding, and their difficulty in communicating how they feel. Older children may be affected as well and like their younger siblings might find it difficult to express their feelings.

Following disaster children will show a change of behavior and that will be the focus of the present study. The emotional impact of disaster often persists well after the physical impact. Children will evidence symptoms related to the disaster either at home or at school. These are usually abnormal reactions to abnormal situations and, it is important for the physician to know how to recognize the physiological sequels in order to assist the child and family (Pynoos; 1990).

1 .2 Statement of the problem

Flood disaster is a major issue for researchers, policy makers. Government and Non-governmental organizations in Ethiopia nowadays. Yet minimum attention has been given to its devastating effects on children, families, and the community as a whole.

Flood disasters are out of the realm of normal human experience and from a psychological standpoint, are traumatic enough to indicate stress in anyone regardless of previous experiences or functions. Catastrophic disasters like flooding have great impacts on tens of thousands of people and disrupt an entire community. The study sought to answer the following questions.

- What type of emotions do D.A. children show?
- What are the best models of psychological assistance?
- What does life look like after the flood as compared to life before the flood?
- Do responses to disaster vary by Gender?

1.3 Objective of the study

The research has the following general and specific Objectives

1.3.1General Objective

The overall aim of the research is to investigate and understand the psychosocial problems of flood-affected adolescents of Dire Dawa city and to know the measures taken by the government and non-Government agencies to reduce their sufferings.

1.3.2. Specific objectives

The following are the specific objectives of the research:

1. To identify the psychological consequences of flood on the affected children.
2. To explore the effects of the problem in relation to gender.
3. To study what life looks like before and after the flood disaster.
4. To recommend the models of psychosocial intervention mechanisms.

1.4 Significance of the study

Now a days natural and man made disasters have become global problems. Various efforts in various countries have been done to over come such problems. However, they are high risk for developing countries like Ethiopia. Disasters occurring in developing countries cause more numerous and severe mental health consequences than do disasters in developing countries.

I believe this research work will provide possibilities to give information for Non Governmental organizations, policy makers, community health workers etc. in their attempt to fight disasters. It could be used as a tool by the organizations to identify the psychological and social aspects of flooding-on the real lives of their infected and affected clients, communities. The result of the study may help as a point of departure for other researchers who want to under take studies in this area.

This thesis will be a landmark initiative to enhance service to children and families following a disaster. It attempts to provide physicians, psychologists, and counselors with information to explore a variety of roles in disaster response and recovery as well as tools to better assist and threat the needs of children. The aftermath of a large-scale disaster

places stresses and strains on the entire fabric of a community and its residents. It is my hope that this paper will provide a resource to help more effectively in very tough times.

Since No research has been conducted in the area to identify the problems and their solutions, the study is designed to provide empirical evidences regarding the psychosocial problems of adolescents in the flood heat of Dire Dawa.

1 .5 Delimitation of the study

The study area is confined to Dire Dawa zone. The reason the researcher has delimited his study in this area is that the researcher has lived in the society for ten years. Because of different constraints, the study has not included other flood areas like south Omo, rural areas with a different psychosocial and economic setting. There is not sufficient study conducted to investigate psychosocial problems of flooding.

The variables to be focused in the discussion are those major factors related to psycho-social impacts of disaster such as effects of flood in relation to gender, psychological consequences of flooding, coping mechanisms, life before and after the disaster, the best models of psychological assistance, and how adolescents feel , think behave regarding abnormal situations

1.6 Definition of important Terms

Operational definitions

Trauma:-trauma has both a medical and psychiatric definition. Medically "trauma" refers to serious or critical bodily injury, wound, or shock. This definition is often associated with trauma medicine

practiced in emergency rooms and represents a popular view of the term. Psychiatrically, "trauma" has assumed a different meaning, and refers to an experience that is emotionally painful, distressful, or shocking, which often results in lasting mental and physical effects Psychiatric trauma, or emotional harm, is essentially a normal response to an extreme event.

Disasters: - are events that are out of the realm of normal human experience and, from a psychological standpoint, are traumatic enough to induce stress in anyone, regardless of previous experiences or function. (Saylor, 1994)

A disaster is a calamitous event that generally involves injury or loss of life and destruction of property. These events are traumatic and customarily outside the scope of normal human experience; thus, are likely to involve psychological as well as physical injury.(Joseph ,1999)

Somatic symptoms: - somatic problems such as headaches, abnormal pain, are commonly observed in children following a disaster and are usually self-limited. If these complaints begin to interfere with the child's life, then the child and family should be referred for mental health counseling (Sugar; 1992).

Defiant/aggressive behavior: - Hostile behaviors that may take the form of hitting, biting, or pinching by toddlers or preschoolers, or fighting and not getting along with peers among school-age children, or delinquency and excessive rebellion by adolescents (Sugar, 1992).

Anxiety: - Anxiety occurs in all age groups. One must not minimize or dismiss the expression of anxiety and should encourage the verbal child

and teenager to discuss their fears and anxieties. Many times the child is the mirror for parents and/ or siblings' anxieties. Thus, family counseling is usually recommended to allow parents and children to know and try to understand each other's feelings (Sugar,1989).

Depression: - Adolescent depression is characterized by dejection, low self-esteem, and indecisiveness, loss of motivation, disturbed sleep, and sometimes-suicidal preoccupation. Presumably, because they are more unstable in mood and temperament than adults are, adolescents are more vulnerable to depression when faced with disappointment, crisis, or failure (Kleinmuntz, 1980).

Schizoid: - A large category of psychosis that includes a group of disorders marked by severe disturbances of thinking, mood, and behavior (Benjamin, 1980).

Delinquency:-Antisocial behavior motivated by goal-oriented needs or frustrating circumstances with which the individual cannot cope.

Frustration;- Blocking of goal-directed behavior. The occurrence of aggressive behavior always presupposes the existence of frustration always leads to some form of aggression (Kleinmuntz, 1980).

Posttraumatic stress Disorder:-Is a mental disorder resulting from exposure to an extreme, traumatic stressor (DSM-IV, 1994).

CHAPTER TWO

Review of related literature

2.1. Introduction

A disaster is usually defined as an event that

1. Involves destruction of property
2. Includes injury and/or loss of life (Pynoos, 1990).

In recent years, the new media has brought the realities of disaster in the world to the attention of the public. Since the 1974 disaster relief act, become law. There have been more than 800 major federally designated disasters in the United States and more than 8000 deaths annually due to natural and human caused disasters-(Pynoos, 1990).It will have psychological and social effects on the individuals.

The legacy of disaster is serious and has widespread physical and emotional squeals: the emotional impact of a disaster often persists well after the physical impact. Children may evidence symptoms related to the disaster either at home or at school. These are usually normal reactions to an abnormal situation; therefore, it is important for the physician to know has to recognize the psycho logic squeals in order to assist the child and the family.

Disasters are events that are out of the realm of the normal human experience and, from a psychological standpoint, are traumatic enough to induce stress in any one, regardless of previous experiences or function." catastrophic disasters" are disasters that may have an impact

on tens of thousands of people and disrupt entire communities.(Saylor,1993)

2.1.1 Natural history of disaster

The phases of disaster, weather human-caused or natural, have been studied by the National Institute of Mental health, which lists them as follows:-

1. Pre disaster condition of the community, family and individual.
2. Warning-of impending disaster given by the media or weather changes.
3. Threat of disaster, immediately preceding the actual impact.
4. Immediate post-disaster, when survivors take inventory of events.
5. Rescue phase, in which survivors and emergency workers join to save those affected by the disaster.
6. Remediation performed by the Red Cross, insurance adjusters, Federal Government, and local relief efforts.
7. Recovery period, in which physical strictures are rebuilt and families and individuals begin to cope (National Institute of mental health 1986).

Disasters are usually classified as natural or human-caused, and the differences between them are outlined as follows:

	Natural	**Human**
Causes	Forces of nature	human error
Examples	Earth quakes, Hurricanes, flood	nuclear reactor chemical leaks. etc
Blame	No one	person government, Business

Scope	Various locations	location may be inaccessible to rescuers, unfamiliar to survivors, little advance warning.

Since there is no one to blame in a natural disaster, the victims may direct their anger inwardly and feel guilty for not taking the necessary precautions or they may believe that it was "God's will" or a punishment! In the absence of some one to blame victims may project their anger on to caretakers, including health care professionals.
Human-caused disasters are associated with higher levels of posttraumatic distress than natural disasters (Yule W. 1993) for example, in mass transport disasters, fatalities are sometimes universal, and mutilation and serious injuries often occur. Some survivors develop a phobia for the type of transportation. In human-caused disasters, victims may feel anger towards and blame an individual or group of people whom they hold responsible for the event.

War is another traumatic stressor for children and families, which may lead a child to experience the death of a loved one. Loss of home and possessions, and relocation. During war, children often witness violence. Many war-related problems and feelings that, children and adolescents must overcome during a war are similar to those faced in the aftermath of natural and human caused disasters (Swenson. 1993).

Flood occurs in many places affecting a number of people every year. The damage it causes on a global scale is increasing. Flood events are not new to Ethiopia. Dwellers of Dechatu and Ashawa Meda areas of Dire-Dawa had celebrated the previous new-year with much joy and feast, wined and dined with their neighbors. Today they have lost their loved ones. Fathers, mothers, children, brothers, sisters and others.
According to recent report, Ethiopia experienced two types of floods: Flash flood and river floods.

Flash floods are the one formed from excess rains falling on upstream watersheds and gush down stream with massive concentration speed and force, often they are sudden and appear UN noticed. Therefore, such floods often result in a considerable toil: and the damage becomes especially pronounced and devastating when they pass across along human settlements and infrastructure concentrations. The recent incident that the Dire-Dawa city experienced is that of flash flood.

Much of the flood disaster in Ethiopia is attributed to rivers that overflow or burst their banks and inundate down stream to the plain lands. The flood that has recently hit southern Omo-Zone is a typical manifestation of river floods. Therefore owing to its topographic and altitudinal characteristics flooding, as a natural phenomenon, is not new to Ethiopia. It has been occurring at different places and times with varying intensity. It was at a manageable or a tolerable magnitude .However, since late July 2006, unusually heavy rains resulted in flash floods and overflow of river and dams that took the country by surprise, affecting 200,000 people in eight regions of Ethiopia causing loss of life, damage of property and displacement of residents. The flood situation that resulted in considerable human death, displacement and suffering as well as loss of property and crop damage is indeed.

The heavy rains in the highlands of east Hararghe Zone of Oromiya state caused flash flood from the over flow of Dechatu dry season stream that bit Diredawa town in the middle of the night on the six of August,2006 while residents were asleep. According the Dire-Dawa administration the flood displaced over 10,000 people and killed 256 others. Currently over 6,000 people are temporarily sheltered in six sites including schools and other compounds ,roads, bridges and other public properties were damaged and washed away (Herald,2006).

The extraordinary overflow of Omo River in August severely displaced about 8,000 people in Dasenech and Gnagatom woredas of south Omo Zone It has killed 364 people, swept away some 3,200 cattle,

and destroyed other properties, including 1,000 traditional grain stores. Further more flash flood from Bilata River was reported to have affected 5370 households in Humbo woreda of Wolayita Zone out of which 2,575 house holds were severely affected and require immediate emergency assistance.

As has been explained by Disaster Prevention and Preparedness Agency (DPPA) top officials recently, about 200,000 people have actually been affected by the current massive floods and they are under due emergency conditions. The aftermath of the situation and the measures needed to ameliorate the problem are immense. Even though all concerned are making efforts from the advent of the crisis, many of the affected people are still under serious problems of shelter, health and sometimes, nutrition and potable water supply (Herald, 2006).

Taking the experiences of other countries, which have taken a variety of measures in order to tackle flood adversity, will shed light to the anticipated task of flood prevention and management efforts in Ethiopia.

According to historical records 1092.larger disaster (flood disaster) occurred since 206B.C in China (over a period of 2155 years, an average of one incident in every two years).In the beginning of the 20th century the major areas in China were struck by a number disastrous floods. However, after 1949 the losses due to flooding were less compared with those, before that date because of flood control projects put in place and efforts made in flood preparedness. On the average about 7.8 of million, which accounts for about 7.8% of Chinas total farmland, was affected annually by floods during the period 1950-1990 (Herald, 2006).

The integrated approach to flood management in China is comprehensive and complex.

In view of the frequent flood disasters in China's history emphasis was placed on flood control in the design and operation of all water projects.

Flooding risk such as the one that occurred in Dire-Dawa is said to be so serious due to illegal settlement in flood-prone areas of the town. The types of irregular settlement, which is mostly followed by massive deforestation, urbanization and abnormal river use, tend to reduce the available water storage capacity and amplify flood waves. Protection of riverbanks from obstructive structure is necessary to allow flood passage that can cause damages due to floods.

Although flood management is an integral part of water resource management, it has not been treated separately on sustainable manner in Ethiopia. Some infrastructure plans to prevent the down stream areas from flooding, and flood control mechanisms are proposed and implemented by the government.

2.1.2. Impact of Disasters

Effects of a disaster on a community

Since children do not live in a vacuum, it is important to consider the effects of disaster on their surroundings and helpers see the community, and how those may be reflect on children; each disaster varies in its effects based on its scope, intensity, and the characteristics of the pre disaster community, family, and individual personalities, The effect of a disaster are often widespread, and include the following:

1. Destruction of infrastructures
2. Absence of electricity, sanitations, and potable water
3. Destruction of physical contact with the outside world (e.g. roadways, phones and bridges)
4. Dissipation of community cohesion due to death and injury
5. Vulnerability and exploitation due to disaster and media sensationalism (Sugar, 1988).

2.1.3. Effects of a disaster on Adolescents and their Families

The possible effects of disaster on the family are varied and extremely important to the adolescent. These include the following events:

1. Death or injury to a family member;
2. Loss of family dwelling or possession;
3. Relocation or school change;
4. Job loss; and
5. Parental disorganization or dysfunction

The important caveat to remember is that, adolescents and their families are having an abnormal reaction to an abnormal situation. It is often easier for parents to seek treatment for their children adolescents before seeking treatment for themselves. But sometimes a parent will present a symptomatic child as a way of presenting his /her own symptoms.

Parental adjustment to the disaster is an important factor in the children's adjustment. If there are preexisting family conflicts or psychopathology, these may impede adaptation to the life change caused by the disaster. Domestic violence or substance abuse also may increase after a disaster and seriously impede the family's recovery. If a parent relies too heavily on the children for food support, or alternatively, is overprotective, a child's personal resolution of the effect of disaster may be delayed. A parent's reaction to the adolescent's behavior is also important. A parental response to a disaster correlates well with that of children. (Gleser, 1981) Parents may be so upset that they may not be aware of their child's troubles (Sugar, 1989).

2.1.4, Preexisting risk factors

The preexisting life situations of the child or adolescent needs to be understood for a better assessment of disaster effects. For example, there may be preexisting physical handicaps or psychopathology in the child or family members. In dysfunctional families, there may be an increased tendency to abuse alcohol or other drugs. Children with developmental disabilities or physical handicaps may need added care due to interruption of their care, loss of facilities (such as handicap access buildings), or worsening of conditions secondary to the disaster. These children and families should be targeted for outreach after disaster, as well as pre disaster planning, to assure that facilities and equipment will be available. If any mental or physical health problem exists, the disaster will most likely exacerbate it, and children with these problems should be referred back to the previous practitioner for specific assistance.

2.1.5. Cultural, religious, and ethnic considerations

There is little research about the unique impact of disaster on specific cultural or ethnic groups of children, but there are some observations showing differences (Joyner, 1993). Outreach by leaders of different cultural groups in the community is essential in all phases of a disaster, Information regarding available services should be provided in all languages appropriate to the community. This information may be distributed through church and community groups.

Since religion may be a source of comfort to many in the face of loss of life , property, and sometimes lifestyle , it is important that churches, synagogues, and their clergy become active in the recovery of the community during and after a disaster (Joyner,1993).

2.1.6. Early vs. late effects of disaster

First stage:-Time During and immediately after disaster

Reaction Disbelief, denial, anxiety, relief, grief, altruism

The first stage occurs during the disaster and immediately after it with the attendant emotions of fear, "state of shock "acute anxiety, grief after loss, or relief if the family is intact. There is a great deal of altruism that may even be seen in the willingness of a schoolchild to help a younger sibling.

Second stage:- Time A few days to several weeks after disaster.

Reaction Clinginess, appetite, changes, regressive, symptoms, somatic complaints, sleep disturbances, apathy, depression, anger, and hostile, delinquent acts.

The second stage occurs for several weeks after disaster. Common behaviors during this time include regression to previous developments of emotional upset, e.g. clinginess, changes in appetite, enuresis constipation, headaches, sleep disturbance, and irritability. Anger over loss, survivor guilt and suspicion of outsiders, apathy, depression, and withdrawal may occur. Hostility and violence towards others, pessimism about the future, and posttraumatic play are not uncommon. Any of these symptoms are within normal expectations, provided they last only a few weeks, but the child needs a referral to a mental psychiatric health professional if significant problems persist beyond that. After a disaster, the child or adolescents may have strong feelings of disappointment or resentment if a delay occurs in the building of the home or school. Children may show signs of posttraumatic stress but few will go on to develop a full-blown psychiatric disorder (National Institute for Mental Health, 1987).

Third stage:-time Months later

Reaction Reconstruction. The reconstructive phase is the last phase and may take several years or decades. This is the time when the family members are actively rebuilding their lives, and the physician should monitor and be available to this families. It is important to note that these phases do not always occur in a sequential fashion and children and families may regress (National Institute for Mental health; 1987).

The child's response to disaster depends up on his/her own perception of the trauma which, in turn, is influenced by his/her cognitive and physical development (Vogel, 1993).The following five primary responses seen in children result from loss, exposure to trauma, and disruption of routine.

1. increased dependency
2. nightmares
3. regression in developmental achievement
4. Specific fears about reminders of the disaster , e.g. toy airplane of the child was in an airplane crush
5. demonstration of the disaster via posttraumatic play and reenactments

These symptoms usually last for a month or so after the disaster. If these behaviors persist, referral to counseling may be appropriate (Vogel, 1993).

2.1.7. Grief and bereavement

After a disaster, the child and adolescents must cope with loss, the greatest of which is the death of a family member or friend. Destruction

of home, school, and possessions will also cause the child to grieve. Grieving, a search for meaning, and anger are normal reactions to loss and proceed differently for each child (Gudas 1993).

The presence or absence of emotional support provided by the family and community for children's and adolescents grief reaction is significant. The family's reaction may be helpful or hurtful. Parents also have experienced trauma and loss in disasters, and may initially display disbelief, denial, and depressive symptoms such as weight loss, insomnia poor appetite, alcoholism, and irresponsible behavior. Bereavement may last from 6 to 12 months. If symptoms persist beyond that, or if they are excessive with an inability to return to pre disaster functioning, referral to mental hospital is necessary (Goudas, 1993).

2.1.8. Disruption of normal patterns

The cardinal effects of a disaster on children and adolescents are the disruption of their lives, whether through injury, death, or destruction of homes, schools, or community. This leads to a loss of reliability, cohesion, and predictability, which affects children of all ages. Toddlers usually respond with increased dependency. School aged children usually respond with increased dependency. School-aged children, including preteens, show evidence of trauma with talk and play about the trauma, hostility to peers and family members, and avoidance of previously enjoyable activities. Adolescents also withdraw, have increased interests, fatigue, hypertension, and hostility, sleep disturbances , such as insomnia, resistance to bedtime, refusal to sleep alone, early rising , or excessive sleep, are extremely common. Increased substance abuse, amenorrhea, and teen pregnancy also occur (sugar, 1992).

It is important for parents and teachers to create and maintain a schedule that is predictable for children. Some times, especially with disturbances, the parents need flexibility but also need to establish a routine. Night-lights, stuffed animals, reassurance, and soothing are helpful. Compassion is helpful, but punishment is not. Discipline can reinstitute as usual.

2.2. Somatic symptoms

Somatic problems such as headaches, abdominal pain, and chest pain are commonly observed in children and adolescents in the weeks following a disaster and are usually self-limited. If these complaints begin to interfere with the child's life, then the child and family should be referred for mental health counseling. The primary care physician can help by reassuring the child and family that these somatic complaints are not signs of serious physical illness but that they will be addressed and will resolve with time and proper counseling.

2.2.1 Aggressive /Defiant Behavior

Hostile behavior may take the form of hitting, biting, or pinching by toddlers or preschoolers, or fighting and not getting along with peers among school-age children, or delinquency and excessive rebellion by adolescents. For the younger child, simply setting limits on unacceptable behaviors may result in the desired change. With adolescents, depression and anger about loss of family, routine, or disruption of community (e.g. school or social life) may be expressed in misconduct. Involving them in rebuilding the community or helping young children or the elderly may provide positive outlets for their feelings. Groups, such as the Scouts or school clubs, can be sites of informal, guided discussions in which

preteen and adolescents may feel comfortable in expressing their fears, feelings of loss, and anxiety (sugar, 1992).

2.2.2. Repetitious behavior

The most common type of repetitious behavior is seen in the play of toddlers or pre scholars, after disaster. Adolescents will reenact crucial details of a disaster as a coping mechanism. The result of a child's "game" about the disaster may be different from the actual disaster or the child may portray himself or a family member as a hero (sugar, 1988) Other repetitive behaviors are recurrent nightmares, frequent trauma-specific flashbacks and distress with reminders of the event. These intrusions are very frightening. Posttraumatic play and reenactment shows that the child is still very much involved with the disaster.

2.2.3. Regressive behavior

Separation anxiety symptoms, enuresis, encopresis, thumb-sucking , loss of acquired speech, increased clinging and whining, and fear of darkness are most commonly seen in the school-aged child and young child or toddler. These regressive symptoms are usual and short-lived immediately following a disaster. Parents should be reassured of this so that punishment and shame are avoided. In the older child and adolescent, regression may take the form of competing for parental attention with other siblings, decline in previously responsible behaviors, and extreme dependency. Often a child may experience ancient confusion. If this happens, the child should be reoriented, and the physician should provide reassurance to parents. If these symptoms last for more than few weeks, then counseling for the family and the child is

advised. However, the return of stability and routine to the home, as well as the passage of time, usually rectify the problem (Sugar, 1988).

Anxiety

Anxiety occurs in all age groups. One must not minimize or dismiss the expression of anxiety and should encourage the verbal child and teenager to discuss their fears and anxieties. Many time the child is the mirror for parental and/ or siblings' anxieties. Thus, family counseling usually is recommended to allow parents and children to know and to understand each other's feelings. Children, especially adolescents, if accurately informed by the physician, also must fee less anxious (Sugar, 1988).

Depression

A sense of sadness is common after a disaster. However, if a child or an adolescent has a persistent symptom of depression, then psychiatric intervention is warranted. If there is preexisting depression or other psychopathology in the child or the family, the disaster may exacerbate it and it and strongly hinder adequate recovery. Some preteens and teens may have suicidal thoughts or gestures, especially if a close relative has died. If a teenager expresses helplessness, hopelessness, suicidal ideation, isolation, or other depressive symptoms, then psychiatric evaluation is mandatory. Depression is not the equivalent of sadness, which is usual after a disaster. The physician should alert parents to the common signs of depression, such as decreased appetite, sleep disturbances, constant sadness, and irritability (Sugar, 1988).

Guilt

After a natural disaster, there is no one to blame, but children and teenagers may feel guilt for surviving or having their families and homes in tact. They also may feel guilt for being unable to help, or may blame parents or authority figures for being unprepared or not taking necessary precautions to protect them. Young children may experience "magical thinking," resulting in feeling that they are responsible for the disaster because of something "bad" they did.

In technologic disasters, the same issues apply; however, they may be a person, company, or government to blame. If litigation is involved, the protracted process may mitigate against children and their families putting the trauma behind them. This may result in disillusionment, especially in school-age children and adolescents. Loss of faith in religion may occur (Sugar, 1993).

2.2.4. Screening techniques

The best rapid method for assessing the extent to which a child or adolescent has been affected by a disaster is a directed history inquiry specifying about the following:

1. Change in sleep patterns
2. apathetic behavior and lack of motivation
3. any aggressive behavior (enuresis, encopresis, biting)
4. Change in relationship with family members or peers
5. Grades in school
6. fears and worries(Finch,1993)

There are also numerous self-report scales that are being examined in terms of their ability to screen posttraumatic stress disorder in children, such as the following:

1. Impacts of events scale (Horowitz 1979
2. Reaction index (Frederick ,1985)
3. Childs PTSD Inventory (Saigh,1989)

2.3. TSUNAMI AND MENTAL HEALTH;

What can we expect?

More than three weeks after Tsunami in Southern Asia, people were aware of the staggering scope of the destruction of the disaster. The damage, confusion and chaos caused by the tsunami were reflected in news reports that scrambled to convey the enormity of the event. Early reports were of a Tsunami that had killed thousands of people, but later, the toll still rising, it was conformed that the Tsunami had killed over 200,000. Whole towns and villages have been wiped off the cost of Indonesia, people count in the millions, communities have lost entire economic livelihood and families have been broken apart by death, many children dead and orphaned. Dozens of countries have been affected. The tsunami has not only killed thousands of people, destroyed buildings and towns and damaged the physical health of survivors but has also severely affected their psychological well-being. Faced with the overwhelming knowledge of this vast devastation it is natural to wander how the survivors of the tsunami will cope as a result, what they are at risk for psychologically and how they can be helped (JAMA, 2006).

2.3.1. MENTAL ILLNESS AND RISK FACTORS

WHAT RESERCH HASE SHOWN.

Millions of people have been directly affected by this tsunami and yet according to percentages, the vast majority of them will recover due

to the resilience of human nature. At the same time, many of those people will develop psychological disorders such as major depression, generalized anxiety, and posttraumatic stress disorders. Many more will experience non-specific distress, somatic complaints and other medical health conditions. If the natural disasters studied rate of psychological problem turns out similar to previous several (e.g. Armenian earthquake, mudslides in Mexico. Hurricane Andrew in the United States) 50% or more of those affected could suffer from clinically significant distress or psychopathology (suise, 2006).

Although we do not have extensive knowledge of the mental health consequences of Tsunami in particular, we do know from other large-scale disasters (such as the earthquake in Asia, floods, volcanoes, and hurricanes in North and Central America) that the impact on the mental health of survivors is sometimes enormous. Thus, the mental health consequences of a disaster on the scale of this Tsunami promise to be massive and severe. Studies of these other natural disasters have identified the following factors that indicate individuals more at risk (Suise, 2005).

2.3.2. SEVERITY OF EXPOSURE:

The amount of exposure to the disaster is highly related to risk of future mental problems. Both individual and community exposure will play a role. Those that experienced the Tsunami, followed by those in close contact with victims will experience more lasting impact than those who only had indirect experiences, such as news of the enormity of the devastation. The current literature shows that injury and life threat are more predictive of likelihood of psychological impairment (Suise, 2005).

2.3.3. Gender and Family Variables.

Usually, women or girls were affected more adversely than were men or boys. The presence of children in the home increases the stressfulness of disaster recovery. Marital stress has been found to increase after disaster (Susie, 2005).

Children: - At least 30% of the survivors of the Tsunami are children. Past researches on the reaction of children to natural disasters are limited, yet this proportion of children survivors is especially troubling since children generally exhibit more severe distress after disasters than do adults. This is an especially relevant concern for the tsunami disaster where the United Nations 50,000 children have died in the disaster and that tens of thousands have been orphaned .In some countries hit by the tsunami half the population affected is under 19 years old (Slone, 2005).

Individual risk factors: - We know also that the rates of mental illness could potentially be even higher than from other disasters studied previously because the victims of the 2004 tsunami are likely to have experienced multiple intense stressors. Pre-disaster functioning, secondary stressors and psychological resources are important in determining resilience. Factors such as bereavement, injury to self or another family member, life threat, panic or similar emotions during the disaster, horror, separation from family (especially among youth), extensive loss of property, and displacement have been found to predict adverse outcomes (Susie, 2005).

2.3.4. Higher Risk for Developing Countries:

The location of the disaster had an even stronger influence after completing a comprehensive review of the literature on disaster, on the severity of its psychological outcomes than did its type. On average, natural disasters in developing countries had more severe effects than did incident of mass violence in developing countries although usually human-caused disasters are thought of as being more serious. Most areas affected by this Tsunami were economically underdeveloped (Norris, 2005).

Social Support: - Social support is one of the key ingredients to recovery. Yet through out Asia the various systems and structures of social support have been damaged by this Tsunami. Whole communities were pulled apart, families and friends lost and separated, physical community centers and hospitals destroyed, and roads to connect people washed away. It will be even more difficult to communities to rally around survivors and aid in recovery. Attending to the social needs of disaster victims could go a long way towards protecting them from long-term adverse psychological consequences, Dr. Norris said. Despite these estimates, we still do not know the exact numbers that will develop serious and entrenched psychological problems or the number of individuals that will recover in the next few months. Based on previous studies of disasters human resilience dictates that a large number of individuals will naturally recover from the event and move on, without experiencing debilitating mental health issues. (Dr. Norris 2005).

2.3.5. WITHIN-DISASTER FACTORS

The severity of exposure at the individual or household level was an important predictor of outcomes in almost all samples. The presence

of all of the following during a disaster has been found, at least in some studies, to predict adverse outcomes among survivors:

- Bereavement during the disaster
- Injury to oneself or a family member
- Life threat
- Panic or similar emotions during the disasters
- Horror
- separation from family (especially among young people)
- extensive loss of property
- Relocation or displacement (Norris, 2005)

As the number of these stressors increased, the likelihood of psychological impairment increased. In general, injury and life threat were most predictive of long-term adverse consequences, especially PTSD (Norris, 2005).

2.3.6. Post disaster factors

Both life-event stressor (discrete changes) and chronic stresses were strong predictors of survivor's health. Moreover, stability versus change in psychological symptoms was largely explained by stability versus change in stress and resources (Norris, 2005).

Some research suggests that acute stressors (the individual-level aspects of exposure outlined above) amplify psychological distress by intensifying or otherwise negatively affecting chronic stressors such as marital stress, financial stress, and ecological stress.)

Attention need to be paid to stress levels in stricken communities long after disaster has passed. Resources are important features of the post disaster environment.

2.4 Effects of Traumatic Stress in the Disaster situation

It is important to help survivors recognize the normalcy of most stress reactions to disaster. Mild to moderate stress reactions in the emergency and early post impact phases of disaster are highly prevalent because survivors (and their families, community members and rescue workers) accurately recognize the grave danger in disaster (young et al., 1998). Although stress reactions may seem "extreme", and cause distress, they generally do not become chronic problems. Most people recover fully from even moderate stress reactions within 6 to 16 months (Fleming, 1993).

In fact, resilience is probably the most common observation after all disasters. In addition, the effects of traumatic events are not always bad. Although many survivors of the 1974 tornado in Xenia, Ohio, experienced psychological distress, the majority described positive outcomes: they learned that they could handle crisis effectively, and felt that they were better off for having met this type of challenges (Quarantelli, 1985). Disaster may also bring a community closer together or reorient an individual to new priorities, goals or values. This concept has been referred to as "posttraumatic growth" by some authors (see. Calhoun, 2000), and is similar to the "Benefited response" reported in the combat trauma literature (WWW, nswiop. nsw. edu.au internet).

There are a number of possible reactions to a traumatic situation that are considered within the norm for individuals experiencing traumatic stress.

2.4.1 Common traumatic stress reactions

Emotional Effects

* Shock
* Terror
* Irritability
* Blame
* Anger
* Guilt
* Grief or sadness

Cognitive effects

Impaired concentration
Impaired decision making
Ability
Memory impairment
Disbelief
Confusion
Nightmares etc.

Physical Effects

*Fatigue, exhaustion
*insomnia
*cardiovascular
*startle response
*hyper-arousal
*increased physical pain
*reduced immune response
*headaches
*vulnerability to illness

interpersonal Effects

*increased relational conflict
*social withdrawal
*reduced relational intimacy
*alienation
*impaired work performance
*impaired school performance
*Decreased satisfaction
*distrust
*feeling abandoned/rejected (

Although many of the above reactions seem negative, it must be emphasized that people also show a number of positive responses in the aftermath of disaster. These include resilience and cooping, altruism, e.g., helping save or comfort others, relief and elation at surviving disaster, sense of excitement and greater self- worth, changes in the way they view the future, and feelings of " learning about one's strength " and "growing "from the experience As quoted by (Norris; 2005).

2.4.2. Problematic Stress responses

The following responses are less common and indicate that the individual will likely need assistance from a medical or mental- health professional:

- Severe dissociation (feeling as if the world is unreal, not feeling connected to one's own body, losing one's own sense of identity or talking on a new identity, amnesia)
- severe intrusive re-experiencing (flashbacks, terrifying screen memories or nightmares, repetitive automatic reenactment)
- Extreme avoidance (agoraphobic-like social or vocational withdrawal, compulsive avoidance)
- Severe hyper -arousal (panic episodes, terrifying nightmares, difficulty controlling violent impulses, inability to concentrate)
- Debilitating anxiety (ruminative worry, severe phobias, unshakable obsessions, paralyzing nervousness, fear of losing control/going crazy)
- Severe depression (lack of pleasure in life, feeling of worthlessness, self-blame, dependency, early wakening)
- problematic substance use (abuse of dependency, self-medication)
- Psychotic symptoms (delusion, hallucinations, bizarre thoughts or images (DSM-IV, 1994).

Some people will be more affected by a traumatic event for a longer period than others will, depending on the nature of the event and the nature of the individual who experienced the event. One of the most debilitating effects of traumatic stress is a condition known as

posttraumatic Stress Disorder (PTSD) The current trauma literature suggests that many factors are related to the increased or decreased risk for PTSD. The likelihood of developing PTSD and the severity and tonicity of symptoms experienced is a function of many variables, the most important being exposure to a traumatic event. It is therefore important to bear in mind that, even among vulnerable individuals, PTSD would not exist without exposure to a traumatic event (DSM-IV, 1994).

2.4.3. Symptoms of PTSD

Post Traumatic Stress Disorder (PTSD) is a mental disorder resulting from exposure to an extreme, traumatic stressor. PTSD has a number of unique defining features and diagnostic criteria, as published in the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV, 1994) these criteria include:

- Exposure to a traumatic stressor
- Re-experiencing symptoms
- Avoidance and numbing systems
- Symptoms of increased arousal
- Duration of at least one month
- Significant distress or impairment of functioning

2.4.4. Re-experiencing symptoms

One set of PTSD symptoms involves persistent and distressing re-experiencing of the traumatic event in one or more ways. With these symptoms, the trauma comes back to the PTSD sufferer through memories, dreams, or distress in response to reminders of the trauma. An extreme example of this is flashbacks, where individuals feel as if they are reliving the traumatic experience. This is a severe, less common re-experiencing symptom. PTSD is distinguished from normal remembering of past events by the fact that re-experiencing memories of the trauma (S) are unwanted, occur involuntarily, elicit distressing emotions, and disrupts the individuals functioning and quality of life (DSM-IV, 1994).

Who develops Acute Stress Disorders and Post Traumatic Stress Disorders?

The percentage of those exposed to traumatic stressors who then develop posttraumatic Stress Disorder can vary depending on the nature of the trauma at the time of a traumatic event, many people feel overwhelmed with fear; others feel numb or disconnected. Most trauma survivors will be upset for several weeks following an event but will recover to a variable degree without treatment .The following types of exposure places survivors at high risk for a range of post disaster problems:

- Exposure to mass destruction or death
- Toxic contamination
- Sudden or violent death of a loved one

- Loss of home or community (as cited in Bryant, 2000)

An individual must be exposed to a traumatic event in order to develop PTSD; other risk factors that have been shown to contribute to the development of PTSD include magnitude, duration, and type of traumatic exposure. Variables such as early age when exposed to the trauma and a lower level of education are also associated with increased risk for developing PTSD. Additional factors related to vulnerability for developing PTSD include: Severity of initial reaction; Pre-traumatic dissociation (i.e. feeling numb and having a sense of unreality during and shortly following a trauma); early conduct problems; child hood adversity; Family history of psychiatric disorders; poor social support after a trauma; and personality trait such as hyper sensitivity , Pessimism, and negative reactions to stressors .Women are likely to develop PTSD than men, independent of exposure type and level of stressor, and a history of depression in women increases the Vulnerability for developing PTSD (Nelson, as quoted by Norris , 1995). While exposure to a traumatic event may result in an increased vulnerability to subsequent traumas, several studies have also reported that exposure to trauma can have a ASTRESS INOCULATIONA effect and can strengthen an individuals protective factors. This is because the individual has gained experience in successfully mastering traumatic events (ursano, as quoted by Norris, 1999).

Several factors in the acute-phase recovery environment of a disaster have been found to aggravate stress reactions and therefore increase survivors' risk of developing negative outcomes (EMA, as quoted by Norris, 1999) these includes:

Lack of emotional and social support

Presence of other stressors such as fatigue, cold, hunger, fear, uncertainty, loss,

Difficulties at the scene

Lack of information about the nature and reasons for the event

Lack of, or interference with, self-determination and self-management

Treatment (given)in an authoritarian manner

Lack of follow- up support in the week following the exposure

Positive factors that may mitigate negative effects include:

- Higher income and education
- Successful mastery of past disaster and traumatic events
- Limitation or reduction of exposure to any of the aggravating factors listed above
- Provision of information about expectations and availability of recovery services
- Care, concern and understanding on the part of the recovery service personnel

Social support

- Provision of regular and appropriate information concerning the emergency and reason for action

Finally, community-related mediators that may also help alleviate distress are rapid disaster relief and a positive community response that not single out certain survivors as victims (Solomon et al., as quoted by Norris, 1993).

2.4.5. Associated Disorders

In addition to PTSD and ASD, individuals who experienced trauma are at heightened risk for developing other psychiatric disorders, including:

- Depression
- Substance abuse
- Panic disorder
- Obsessive-Compulsive Disorders etc.
- Sexual dysfunction
- Eating Disorders (DMHRH,1997)

2.4.6 Bereavement and bereavement complications

In a situation of traumatic or catastrophic loss, the bereaved person may demonstrate both traumatic stress reaction phenomena, with either predominating or appearing intermittently (Raphael, 1997).Although a discussion of loss usually focuses upon death, loss that results from post disaster experiences may thus include (Cohen, 1998).

- Loss by death of loved one, family, or friend
- Property destruction
- Sudden unemployment
- Impaired physical, social, psychological capacities and processes
- It is generally agreed that there may be an initial and usually brief period of shock, numbness and disbelief, and to a this degree, denial. While may be more prolonged if additional impact of psychological trauma. This initial period usually gives way to

Intense separation distress or anxiety. The bereaved person is highly aroused, seeking for or scanning the environment for the lost person on higher alert. There may be searching behaviors, particularly if it is not certain that the person is dead, or the body has not been identified. In a disaster, setting the bereaved person may place himself or herself at further risk through agitated searching behaviors. There is also likely to be a sense of anger, protest and abandonment- anger that may be recognized as irrational by the bereaved person but nevertheless amounts to anger towards the deceased for not being there and for being among those who died. Anger is also directed towards those who may be seen as having caused or been associated with the deaths, which are alive when the deceased is not.

Normal bereavement shows both attenuation of psychological distress and progressive functional adaptation during the first few months Complications may include adverse mental health outcomes such as impact on immune function (Bartrop; as quoted by Norris1997), development of depressive or anxiety disorders, and adverse social or health effects (Raphael, as quoted by Norris 1998). It has been shown that about 9% of normal community sample of bereaved people may develop "chronic Grief." This is a form of abnormal grief where the initial acute distress continues with other manifestations for six months or more, and often for many years. "Traumatic grief "and complicated grief disorder are similar forms (Raphael, as quoted by Norris 1999).

Thus, it is clear that many circumstances of disaster deaths may be likely to lead to higher risk of bereavement complications. It has also been shown that inability to see the body of the dead person may further contribute to risk of adverse outcomes (Singth & Raphael, 1981 Website :

Www, nswiop, new, edu, au), perhaps disrupting opportunities for farewell.

Unexpected loss results in more pronounced psychiatric symptoms, especially anxiety, which was more difficult to resolve. The phenomenon identified at long-term follow-up includes high levels of numbing and avoidance and could be interpreted as reflecting traumatic stress effects.

2.4.7. PRE-ADOLESCENTS AND ADOLESCENTS (12-18)

Below are some common reactions that children and adolescents may display.

- Life threatening reenactment
- Rebellion at home or school
- Abrupt shift in relationships
- Depression and social withdrawal
- Decline in school performance
- Trauma-driven acting out
- Effort to distance oneself from feelings of shame, guilt, and humiliation
- Retreat from others in order to manage inner turmoil
- Accident proneness
- Wish for revenge and action-oriented responses to trauma
- What parents do to help their children? For children Eleven to eighteen years:
- Encourage adolescents of all ages to talk about the traumatic stress, event with family members

- Provide opportunities for the young person to spend time with friends who are supportive.
- Reassure the young person that strong feelings- guilt, shame, embarrassment, or a wish for revenge-are normal following a trauma. *
- Help the young person find activities that offer opportunities to express mastery.
- Encourage pleasurable physical activities such as sports and dancing (Pynoos, 1993).

2.5. HELPING ADOLESCENTS COPE WITH A DISASTER

Preparing for a disaster and coping with it afterwards can sometimes be difficult for children and their families. Children may be frightened by the disaster itself, or be upset by disruption that a disaster might cause in their daily routines or their relationships with parents, teachers, and friends. It is not unusual for children to show changes in behaviors that may be signs or symptoms of distress or discomfort following a disaster.

Adolescents will be especially affected during these times because of their sense of vulnerability, their lack of understanding, and their difficulty in communicating how they feel. Older children will be affected as well, and like their younger siblings might find it difficult to express their feelings (Pynoos, 1993).

2.5.1. FOLLOWING A DISASTER:-

Adolescents will be afraid of the disaster recurring, or become anxious when there is rain, storms, sirens, or other reminders of the disaster;

- Because they become easily upset, or cry and whine more frequently; or get angry, act out, or get into trouble;

- Become more active, restless, and "jumpy" or have difficulty paying attention;
- Be afraid of sleep alone, or want to sleep with a parent or another person. They may have nightmares or difficulty of falling asleep;
- Have difficulty of separation or be afraid to be left alone, Children may not want to be out of parents' sight and may refuse to go to school or their childcare.
- Have symptoms of illness such as nausea, vomiting, headaches, or may have less appetite
- Be quite and withdrawn, or do not want to talk about the experiences;
- Feel guilty that they caused the disaster because of some previous behavior
- These changes in behavior are common in adolescents who have been through disaster, and are natural responses to stress. Some of these symptoms may last for weeks or months, or they will diminish over time. Except for extreme circumstances (Monahan, 1997).

Responses to disaster Vary by Gender

Responses to a disaster may also vary across gender.

Boys:-

- take longer to recover

- display more aggressive, antisocial, and violent behaviors

Girls:-

- are more distressed
- are more verbal about emotions
- ask more questions

- Have more frequent thoughts about the disaster (Sugar, 1989) after a disaster, the child and adolescents must cope with loss, the greatest of which is the death of a family member or friend. Destruction of home, school, and possessions will also cause the child to grieve. Grieving, a search for meaning and anger are normal reactions to loss and proceed differently for each child (Koocher GP).

The presence or absence of emotional support provided by the family and community for children's grief reaction is significant. The families' reaction may be helpful or hurtful; Parents also have experienced trauma and loss in disasters, and may initially display disbelief, denial, and depressive symptoms such as weight loss, insomnia, poor appetite, alcoholism, and irresponsible behavior (Guads, 1993).

2.6. Psychological consequences of major Hurricanes and Flood: Range, Duration, and magnitude of effects and risk factors for adverse outcomes

The following summary of research findings are drawn from a comprehensive reviews of disaster mental health literature published in 2002 (Norris et al., 2002; Norris, Friedman, &Watson, 2002) and updated in 2005, (Norris, 2005, WWW, ream.Org). This summary focuses

specifically on the results from the 57 most relevant studies that examined the aftermath of Hurricanes (31), floods, (20) Tornadoes(4) and dam collapse(2).Most of these studies were about adult survivors , with the remainder concerned with children (11)(Norris, 2005).

2.6.1. Range of outcomes

Specific psychological problems were identified in most of the studies. Post Traumatic Stress Disorder or PTSD was found in 74% of the samples, depression, or major depression disorder was found in 33% of the samples, and anxiety or generalized anxiety disorder was found in 19% of the samples.74% of the studies found some people with PTSD in their samples;

Non –specific distress, assessed by means of global indices of psychological and psychosomatic symptoms, was identified in 33%of the studies.

Health problems and concerns, such as self-reported somatic complaints, verified medical conditions, increased taking of sick leave, elevation in psychological indicators substances, and relapse and illness burden, were identified(Noris,2002).

2.6.2. Risk factors

Paraphrasing severity of exposure

1. Severity of exposure was universally important. It is perhaps the single most important factor for assessing risk for adverse outcomes.

2. Individual-or household –level severity of exposure was an important predictor of outcomes in almost all samples , as follows: All of the following have been found, at least in some studies, to predict adverse outcomes among survivors:

    - Bereavement
    - Injury to self or another family member
    - Life threat
    - Panic or similar emotions during disaster
    - Horror
    - Separation from family (especially among youth)
    - Relocation or displacement

As the number of these stressors increase, the likelihood of psychological impairment increased.

In general, injury and life threat were most predictive of long-term adverse consequences, especially PTSD

Neighborhood- or community –level severity of exposure was assessed only occasionally but had modest outcomes, as follows:

- Personal loss was more strongly related to increase in
- Negative effects, but community destruction was more strongly related to decrease in positive affect, reflecting a community-wide range tendency for people to feel less positive about their surroundings, less enthusiastic, less energetic, and less able to enjoy life.
- Such findings are an excellent reminder that disasters influence whole communities, not just selected individuals.

Gender influenced post disaster outcomes, as follows:

- In most studies found gender differences, women or girls were affected more adversely by disaster than men or Boys

Age and experience influenced disaster victims' outcomes, as follows:

- Older adults were at a great risk than were other adults in only two studies that examined age differences.
- In the majority of the studies where they were differentiated from older and younger adults, middle – age adults were most adversely affected.
- Cross-cultural research suggests that the effect of age may differ across countries according to the social, political, economic, and historical context of the setting involved.
- Professionalism and training increases the resilience of recovery works, although past trauma per se does not.

Ethnicity shaped the outcomes of disaster victims in some studies, as follows:

- Among youth, results of ethnicity were not entirely consistent. However ethnic minority youth were at great risk than other in a few studies, where effects of ethnicity were studied
- Among Adults, results for ethnicity were quite consistent, ethnic minority adults were at

greater risk than other in those studies that documented some effect of ethnicity.

Status (SES), as manifest in education, literacy, or occupational prestige, Socio economic affected outcomes in a number of studies of disaster victims. In almost all of these, SES was associated with great

Post disaster distress. The effect of SES has been found to grow stronger as severity of exposure increases.

Family Factors influenced outcomes in several studies, as follows:

- Husbands' symptoms severity predicts wives' symptoms and vice versa, .Marital stress has been found to increase after disaster.
- Children were highly sensitive to post disaster and conflict in the family. Parental psychopathology was typically the best predictor of child psychopathology. Less irritable, supportive, and healthier parents had healthier children.

2.6.3. Implications for intervention

Families are extremely important systems and constitute the most important unit for pre disaster treatment and interventions efforts. Interventions for children may are of limited effectiveness if the family is not considered as a whole.

It is important to provide support to the supporters, especially wives and mothers.

We should educate survivors, and those who come in to contact with them, that avoidance and blame assignment are rarely effective coping strategies

A focus on self-efficacy should be delivered in a way that provides resources without threatening them

Naturally, occurring social resources are particularly vital for disaster victims. Professional and outsiders are important sources of assistance when the level of need is high, but they must not and cannot supplant natural helping networks.

Interventions must address both psychological and social /community needs, they should be reserved for those persons who are most distressed, had week psychological and social resources to begin with (Norris, F. 2005).

2.7. CHERNOBYL'S LENGTHENING SHADOW

The nuclear disaster at Chernobyl has been the subject of books, articles, dramas, and films. The April 26, 1986, accident spurred protest movements and jump-started political parties, new government agencies, and charitable institutions; it was also regarded as a key factor in the development of glasnost in Mikhail Gorbachev's Soviet Union. Nevertheless, after millions of words, there is no agreement on the ultimate outcome of the event.

The collapse of the Soviet Union and the formation of independent states have further complicated the issue –the new governments are unable to meet the myriad coasts of the accident and have only recently begun to coordinate their actions. Meanwhile, tensions between Ukraine and Russia over a number of political and economic issues have not helped.

Adolescents were and continue to be the most exposed and fragile victims of nuclear Radiation disasters, especially that of Chernobyl. They will be the one who will suffer the longest, being crippled already in their mothers' Wombs or having absorbed in to their growing bodies, organs and bones the first high doses of radiation and being subject to the accumulating hazards of radioactive pollution around them. Secrecy on the Chernobyl accident caused unnecessary additional suffering among children and their mothers—and lack of information, support and lack of information, support and funds have left many children to carry too heavy a burden for the mistakes of their elders.

The unexpected sudden increase in cancer of the thyroid gland among children, within five years of the Chernobyl accident, is a very worrisome indication. Between 1966 and 1985, 21 children in Belarus underwent surgery for thyroid cancer. In less than ten years after the Chernobyl accident, between 1986 and 1994, there were 329 who underwent such operations, 84 in 1994 alone. The increase in all types of illnesses has been registered among children in the contaminated areas in Belarus as well as in the most affected regions of Bryans in the Russian Federation. The majority of children born in the five years after the accident in the contaminated areas of Belarus have shown immune system disorders. The child population has shown marked increases in iron deficiency anemia, congenital development abnormalities, bronchial asthmas, chronic diseased of the stomach and intestinal tract, and functional defects of the cardiovascular and nervous systems. Only

relatively small percentages of affected children have been able to leave their polluted environment, some for weeks and some for years, for sanatoriums in non-contaminated areas in their own countries or for treatment in foreign countries such as Cuba (Hirvonen, 1994).

In Ukraine alone about, 500,000 children continue to live in contaminated areas. Children have been stranded in radiated zones, eating locally grown vegetables and fruits and drinking cows' milk, sources of radioactive pollution from the affected food chain. Children also suffer from deteriorating documental conditions due to the desperation of their parents and neighbors in the face of overwhelming problems and drastically reduced options in life (Marples, 1993as quoted by Maarit, 2003).

A total clean up of the Chernobyl disaster is beyond any financial or technological means. People have to continue to live with hazardous consequences of the catastrophe. However much of the suffering of children and their parents could be alleviated. A clean environment is the prerequisite for the realization of the rights of the child, engraved in the Convention of the Child ratified by all three republics affected by the Chernobyl disaster. Children and their parents need all the information they can get regarding effect of radiation on their health and ways to look for assistance and avoid risks. Families must be supported in their struggle to overcome despair and depression. Locally created environmental groups, support groups such as mothers' associations, and social centers need to be strengthened. Lessons should be learned to mitigate the effects of any other looming ecological disasters and to increase the awareness in all levels of society on environmental issues (Norris, 2005).

2.9. Noh's Fate

People have been experiencing stresses, predicaments, and life crisis from beginning of time. They have also found a variety of ways to resolve predicaments and live through crisis. People have always helped others cope with life events well. (Hansel, 1976) cites the biblical Noah anticipants the great flood as an example of how our ancestors handled crisis. Noah was warned of the serious predicament. He and his family would be facing shortly; they prepared for the event and, through various clever maneuvers, avoided being overwhelmed by floodwaters. (Lee Ann Host; 1995)

The aim of this review literature is-

- To identify the psychological consequences of flood affected children.
- To explore effects of the problems in relation to Gender.
- To study what life likes before and after the flood.
- To recommend models of psychological intervention mechanisms.

CHAPTER THREE

3. The Research Design and Methodology

3.1 The Research Methodology

The main purpose of this study was to examine the psychosocial problems of flooding on adolescents in Dire Dawa and to identify the major factors that lead to Traumatic Stress Problems. It also aims to suggest possible intervention strategies that can serve as a way out to their problems.

The method of data collection and the analysis of the research were on the bases of qualitative and quantitative research methods. This was due to:

The validity of using standardized tests used in other settings, cultures, and trying to implement them in the researcher's context will be questionable

Qualitative method can help to get in-depth, precise information

The researcher had previous experiences with parents, adolescents, and the socio-cultural setting of the society. A questionnaire does give him satisfactory information of their deep-rooted emotions, beliefs, problems, experiences. Besides dwellers of Dire Dawa comfortably express their feelings in the classical type of interview method and observation if one knows the ideals of the society. It is easy to be friendly with people of Dire Dawa, gather whatever is observable concerning adolescents, and make comments or questions that are feet and natural to the situation. Time in this study was not an issue except the governing general frame of the schedule. The main concern being to know actions

and reactions of parents and adolescents in their "new" environment. The study is aimed to suggest possible intervention mechanisms that can be useful for adolescents and future researchers.

To serve this purpose descriptive survey research method was utilized with the assumption that it could help to identify the major psychosocial problems that has resulted in trauma stresses.

In this study, the researcher has triangulated both qualitative and quantitative methodologies. However, qualitative methodology is given priority. This is because of the nature of the research question and the study itself.

3.2 Sources of Data

Both primary and secondary data were used in the study Primary source of data were obtained from disaster heat adolescents through questionnaires. Other data were gathered through interview and focus group discussions conducted with adolescents. These sources have assisted the researcher to acquire first hand information and draw inferences.

Secondary data were also obtained through documentary analysis Primary data were analyzed by employing appropriate statistical methods, (SPSS Analysis) Findings were summarized and recommendations were made.

3.3 Sample Population and sampling techniques.

3.3.1 Sample population

Out of 5 camps controlled and inspected by Disaster Prevention and Preparedness Agency (DPPA) the researcher was able to get a list of flood

victims constituting 1318heads of house holds. Regarding adolescents 120 (between Ages 15-17) were taken from the total population of 287 adolescents listed and assisted by DPPA who were between the Ages of 15-17. This subsumes 41.81% of the total adolescents who were in the camps. These 120 were taken to fill the questionnaire. For the focus group discussion the researcher took **50** youngsters, from 5 camps and randomly selected **2** from each camp; a total of 10 respondents. For the interviews six flood victims who lost family members, 5 kebele officials, 3 Orthodox church leaders, 3 Mosque leaders, 2 school directors were involved in the interview, 148 people were used for the data collection; however, out of 120 questionnaires given to the adolescents, 20 were spoiled and discarded, therefore adolescent sample used for this study were 100.

3.3.1Sampling techniques

For the purpose of this study, the researcher selected the 5 camps purposefully to draw the sample of adolescent camp settlers were taken, by assuming that they could have a better awareness about the question raised. The economic activity, of life, working conditions, socio-cultural background of the community and size of the number of flood-affected adolescents are taken in to consideration. The respondents from these camps were selected by systematic random sampling techniques. Availability sampling was employed. Nevertheless, it will be noted that the respondents were selected from different ethnic groups; different religions and interpreters were to translate the original Amharic questionnaires.

Number of respondents included in the study

Table 1.

No		Total
1	Boys (questionnaires)	60
2	Girls (questionnaires)	60
3	Focus group (boys)	5
4	Focus group (girls)	5
5	Kebele officials	5
6	Church Leaders	3
7	Mosque Leaders	3
8	other flood victims	6
9	School Directors	2

Grand Total=149 respondents

3.4. Instruments and procedures of data collection

3.4.1. Instruments

To gather data four, basic procedures were used as a potential source of information:

1. Data regarding flood victims were collected from Dire Dawa Disaster Prevention and Preparedness Agency.

2. A questionnaire was designed to collect data from disaster-affected adolescents. Open-ended questions were also forwarded possible demanding the respondents to write suggestions, which they think should be included.
3. Interview guides were prepared to obtain additional information from those who are concerned
4. Focus group discussion guides were prepared to enrich the information gathered for the study from adolescents

3.4.2 Procedures in data gathering

Items to be included in the instrument were selected as follows. Questionnaire, interviews and focus group discussion items were prepared first in English and then translated into Amharic by the researcher since he was a graduate of ILS in 1960's.

In order to ensure the appropriate validity of the questionnaire it was given to four professionals of Addis Ababa University 5 questionnaires (out of 40) were omitted. The rest (35 items) served for the Pilot Study conducted on 30 adolescents in Dire Dawa city. After item analysis, five were not clearly understood so they were disregarded. The coefficient of reliability to the questionnaire was computed to be **.79** using Cronbach Alpha after pilot study item analysis. In other words, 30 items closed ended and three questions open-ended, 33 items were used in the questionnaires.

The interview and focus group discussion guides were also piloted and refined in the above town. The trip to Dire Dada had helped to identify ambiguities and misunderstanding, establish sample procedures as well as, test the validity of the instrument for collecting the necessary data.

After identifying different camps, two research assistants were employed on part time bases. They were selected for their language skills, academic qualifications and familiarity to the camp people with recommendation of Camp DPPA administrators. They were given a short training for a half day on how to administer questionnaires in support of the researcher. The training consisted of instruction in general techniques and general procedures for completion of questioners by respondents. They had to serve as translators and paper collectors. Suitable time was chosen for the respondents to maximize the quality of responses and degree of return.

Respondents (120) were seat in four classes in Saint Mary School. The Necessary clarifications were given by the researcher for questions asked regarding some of the items from individual respondents. The necessary explanations were given in Amharic, Afan Oromo, and Somaligna by the researcher and his assistants. They were free to ask in their mother tongues. Then respondents were allowed to give their own answer to each item individually and they were able to fill the questionnaires without any problem and with content and closely supervised by the researcher and assistant researcher.

In the case of those who were to be interviewed they were identified as mentioned in the sampling sections, discussions were made on the objectives of the interview in order to minimize misunderstanding. At last, the researcher conducted the interviewing and recording by using tape recorder .Focus group were five Girls and five Boys =10. The researcher was democratically taking the lead. The discussions were conducted using tape recorders.

3.5 Method of Data Analysis

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3.5.1 Data Analysis Techniques

Descriptive survey both quantitative and qualitative data analysis method were used.

To analyze the quantitative data, the following statistical techniques were employed.

Percentage was used to explain the personality characteristics of respondents, document analysis and degree of the influence of psychosocial factors on the behavior of adolescents.

The weighted mean was calculated to identify the major factors that maximize stresses and traumas.

SPSS was used to determine the significant mean difference male and female respondent's views on the influences of psychosocial factors of flooding and to see the perception differences of the two respondents.

In all the above cases, the existing differences were tested for statistical significance at **0.05** levels to tolerate errors that occur due to chances. Using the above tools the following chapter treats the data obtained. Qualitative data were employed to support quantitative analysis.

CHAPTER-FOUR

4. RESULTS AND DISCUSSION OF DATA

The questionnaires were distributed to 120 adolescents. Among those 100were, precisely filled.19 people were involved in theinterview.10 youngsters participated in the focus group discussion respectively
The responses of adolescents and Dire Dawa city dwellers were analyzed and interpreted.
The responses of city dwellers and kebele officials were used as additional ideas to substantiate the disaster affected adolescents .As a result, the responses are expected to be sufficient to draw inferences for the study.

4.1 Differences between Males and Females

The purpose of this sub-topic is to give some basic information about the target population. The target groups of this study were Flood affected adolescent victims of Dire Dawa.

Table 2

Attest

Group statistics

Sex		N	Mean	Std. Deviation	Std. Error Mean	T	P
PTSD	M	50	125.64	12.417	1.756	-2.694	0.008
	F	50	132.22	12.002	1.697		

Since P < 0.05

Significant

Females exhibit more PTSD than males.

PTSD is a mental disorder resulting from exposure to an extreme, Traumatic stressor like flooding. My study shows that girls have more PTSD than boys, though it almost touches all part of the community.

A research done by Sugar, 1989" states that:-

Adolescent Girls: - Are more distressed than boys

Are more verbal about emotions (sugar, 1989)

A study conducted by, Norris, 2005 shows that:-

In most studies found gender differences, women or Girls were affected more adversely by disaster than men or boys.

Other studies also make the researchers idea vivid. A study on major HURRICANES and flood also shows that In most studies that found gender differences, women or girls were affected more adversely by disaster than men or boys (Norris; 2002).

Table 3

Group statistics

T-test

Sex		N	Mean	Std. Deviation	Std. Error Mean	T	P
Obmandf	M	50	32.84	3.798	0.537	-2.936	0.004
	F	50	34.98	3.485	0.493		

T-Test

Group statistics

Since $P < 0.05$

Anxious/Obsessive

There is a statistically significant difference between males and females in anxiety and obsession.

This shows that girls are more anxious than boys. A sense of threat or impending disaster ; gnawing feelings that despite their best efforts to protect themselves , some unforeseen danger will unpredictably strike out at them. Its' most extreme form being panic. Anxiety occurred in boys and girls because they were threatened with the loss of parents, friends, relatives, neighbors etc. Symptoms like being lonely, worries, feelings of unloved ness, cries, sleeplessness, fearing places other than school etc, are clearly seen. The questionnaire and data analysis shows the problems of disaster affected children of Dire Dawa.

The evidence of intense anxiety is unmistakable; the trembling legs, the dry mouth, and the profuse sweating-their outward appearance is like that of someone who is trying to go in all directions at the same time, but who is too confused to settle on a particular course. His or her face reflects the panic of someone who needs immediate help. I observed all the mentioned anxiety symptoms a long time after the disaster.

Table 4
T-test
Group statistics

Sex	N	Mean	Std. Deviation	Std. Error Mean	T	P
Demandf M	50	16.84	2.691	0.381	-1.561	0.122
F	50	17.58	2.001	0.283		

Since P > 0.05

There is no significant difference between males and females in delinquency.

Table 5

T-Test

Group statistics

Sex	N	Mean	Std. Deviation	Std. Error Mean	T	P
Frmandf M	50	28.84	3.930	0.556	-3.614	0.060
F	50	31.26	2.640	0.373		

Since P > 0.05

There is no statistically significant difference between males and females in frustration.

Table 6

T-Test

Sex		N	Mean	Std. Deviation	Std. Error Mean	T	P
Schmandf	M	50	3.94	1.316	0.186	-2.300	0.24
	F	50	4.46	0.908	0.128		

T-Test

Group statistics

Since P >0.05

Not significant

No significant difference between males and females in cruelty.

Table 7

T-Test

Group statistics

Sex		N	Mean	Std. Deviation	Std. Error Mean	T	P
Somandf	M	50	13.06	1.889	0.267	-0.628	0.531
	F	50	13.28	1.604	0.227		

Since P > 0.05

No significant difference between males and females in somatic problems.

Table 8

T-Test

Group statistics

Sex		N	Mean	Std. Deviation	Std. Error Mean	T	P
Aggmandf	M	50	16.96	3.194	0.452	-2.123	0.036
	F	50	18.04	1.653	0.234		

Since P<0.05, there is statistically a significant difference between males and females. That is, females are more aggressive than males.

Not Significant

Aggressive

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My Quantitative analysis shows that pre-adolescents 15-17 years old exhibit responses like , flashbacks, nightmares, emotional numbing, substance abuse, problems with peers, and anti-social behavior. Also common are withdrawal and isolation, physical complaints, suicidal thoughts, school avoidance, academic decline. Sleep disturbances, and confusion. This was supported by the interview.

Therefore, generally from Table 2, 3, 4, 5, 6, 7, 8 and literature review, it is possible to summarize that adolescents will show:-

- Feelings disturbed by reminders of the event
- Somatic symptoms (e.g. stomach aches, headaches)

- Aggressive behaviors and angry out burst
- Fear of feelings and trauma reaction
- Wishes for revenge and action-oriented responses to trauma
- Depression and social withdrawal (lack of pleasure in life)
- Trauma-driven acting out, and reckless risk taking
- Accident proneness
- Severe dissociation(Feeling as if the world is unreal)
- Severe hyper –arousal (panic episodes)
- Lack of financial support

The open-ended questions were-

1. What are the five major problems that you are facing now?

The respondent's answers were

- No Shelter
- Lack of social support
- Lack of food
- Lack of potable water
- Refusal to return to school
- Persistent fear related to catastrophe
- Sleep disturbance such as nightmares (seeing the dead....)
- Physical complaints (stomachaches, dizziness, headaches)
- Withdrawal from parents and friends
- Loss of concentration and irritability
- No latrine

How do you think these problems can be resolved?

- God can give a solution. (Allah can only solve them.)
- The federal government can solve our problems
- A joint work elevates our problems

Do you think you got enough assistance from caretakers?

- The support they gave lasted for few weeks
- It was not able to solve our social life
- What is said and what is done are completely different

Interviews were conducted with 19 people. An attempt was made to find out the psycho- social problems of adolescents through interviews. This has taken the researcher 6 hours of tape recording. The researcher has gone through all the kebeles that are affected by flood Kebele 02, 03, 05, 06, 09 – It stretches from Gende-Guragi to Chat maheber. The researcher has contacted and tape-recorded one official from every Kebelle.

Main aims of organizations were-

- They assist people in terms of social problems.
- They collaborate with the Government in order to help people.
- They give oil, corn powder, sugar, clothes
- They were to assist students in their needs.
- They help though it is weeks lasting.
- They provided us with medicines.
- They teach people on the importance of work ethics.

Major problems they were facing:-

- We always tell the city counsels, people's real problems but there is no one to give solutions.
- People always complain of starvation, food, sugar etc.
- Lack of clean water
- The Ethiopian Radio talks of helps given. It is simply talk! No one seems to see our problems.
- There are nearly ten thousand flood-affected people in Dire Dawa. It is difficult to feed all this. The regional government is struggling

to bring aid in sufficient quantities. It is beyond our capacity to feed 5363people who only live in the camps.

- In one Tent a minimum of five households live. we do not agree especially women.(housing problem exceeds all)
- Lack of clean water
- We teach them the Bible, tell them to worship God, few care.
- They forgot Allah, and Allah forgot them. They do not bother about their Salat.
- In a big camp holding nearly 5,000 people there is no Latrine.
- They do not respect their teachers; they do not care about their education.
- They do not wear uniforms, violate school regulations, are quarrelsome.
- Lack of information about the nature and reason for the event.
- Loss of ability to concentrate at school, with lowering of performance

To overcome these problems

- We need to work hard(joint effort gives solutions)
- We expect a lot from the federal government
- If the money contributed by all Ethiopians is properly managed All of can have a house to live and a job to do.
- Many things are expected from the government. Look... there is only one building built by Hayat (built at Gende Roka, Kebele 03). People like you ask about buildings built. We have one finished, and one started. That is hundred of millions can do!
- The regional Government should mobilize people to other safe areas
- Dams should be built, to give permanent solutions
- Good governance is decisive.

- Education should be given on how to handle crisis by people of the field
- Many things are expected from religious leaders on how to lead normal life, and tackle problems.
- Lack of financial support

Do youngsters show abrupt shift in relationships?

- Yes! they are with one today ,with the other tomorrow
- They have become aggressive. Cruel to themselves .cruel to others.
- They need to be handle politely, other wise they disrespect you
- They have low morals.
- They are depressed, they lack pleasure in everything.
- Decline in school performance

Focus group discussion was conducted with the 10 adolescents randomly selected. The researcher conducted the discussion democratically. It was tape-recorded.

What have you lost because of the flood?

- Lost brother, sister, father, mother, relatives, neighbors. They were dead.
- We have lost all our property
- Lost moral strength.
- We have lost all things. What have we now!
- Separated with things we like, our village ,and we are alone now
- Life in the camp
- No love in the camps
- Every body talks of problems, death ,flooding, Generalized fears etc. so you could not feel at ease in the camps. It is a place of "Hirer"! Horror

- There is lack of clean water, lack of sanitation, the area is not clean, we will die of Cholera .
- We have separated with our peer groups. No intimacy among us.

How have the flood occurred?

- I do not actually remember it. It was in the middle of night that a flash flood entered our house. My father carried me and took me up...there. When he returned my two sisters were taken by the flood. I was the smaller of the two. Our mother died just before 3 years. We 4were living together.
- It was after the flooding has occurred that I came to my self . It was a terrible night! Which I cannot forget it throughout my life. How horrible!
- It was sudden, unexpected, it likes a nightmare, ...

What do you draw in your mind when you hear the word water?

- Water is dangerous, very dangerous.
- Water destroys all things, houses, all property, and every thing.
- Water and Dechatu flash flood are the same. They are killers
- Water does mean flood to me. I am even afraid of community taps; I draw the dead in my mind.

How do you sense death?

- Death is the worst thing ALLAH has put up on people. It is a total separation.
- We dig out people from the sands.
- It would have been good had we died together.
- I was thinking that only old people die, but I saw children, women. Youngsters buried in the sand. Heart breaking.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMENDATIONS

In this chapter, a summary of the major findings of the study, conclusions drawn on the bases of the findings and recommendations that are expected to be helpful are presented.

5.1summary

The main purpose of this study was to assess the influence of the psychosocial factors that affect flood-affected adolescents and come up with a possible intervention strategy that should be implemented to alleviate their sufferings. To identify the psychological consequences of flood affected children.

Data were obtained through questionnaires from adolescents, interviews from disaster areas, and through focus group discussion with parents. Based on the data obtained the following major findings are results of the present study.

Older adults were at greater risk than other adults in many studies were. Rather than viewing older adults as an at-risk group, they could be viewed as a resource for disaster stricken communities.

- Middle- aged adults were most adversely affected in every American sample where they were differentiated from older and young adults. Research suggests that middle-aged adults are most at risk because they have

greater access and burdens before the disaster stricken and they assume even greater obligations afterwards.

- Cross-cultural research suggests that the effect of age may differ across countries according to the social, political, economic, and historical context of the disaster.
- At least in disaster of similar magnitude, prior experience with the specific type of event may reduce anxiety, people who have experienced previous disasters show higher level of hazard preparedness and are more likely to evacuate when authorities suggest they do.
- Professionalism and training increase the resilience of recovery workers, although past trauma per se does not.
- Being a parent also added to the stress of disaster recovery and, especially for events involving uncertain threats, mothers were especially at risk for substantial distress. Children were highly sensitive to post disaster distress and conflict in the family. When measured, parental psychopathology was typically the best predictor of adolescents' psychopathology, parents who were healthier, less irritable, and supportive had healthier children.
- The effectiveness of intervention for adolescents may be limited if the family is not considered as a whole.

Personal loss was more strongly related to increase in negative effect, but community destruction was more strongly related to decrease in positive affects. This reflects a community- wide tendency for people to feel less positive about their surroundings, less enthusiastic; less energetic and less able to enjoy life after being exposed to trauma. Such findings are an excellent reminder that disasters affect whole communities, not just selected individuals. Although no one would suggest that these

community "symptoms" constitute psychopathology or require professional intervention, disasters may impair the quality of life in a community for quite some time.

Over the past 20 years, a substantial amount of research has been published pertaining to risk factors for adverse outcomes. The research base is larger and more consistent for adults than it is for youths. Even for adults, more research on many of these topics would be useful and might alter the conclusions reached thus far. At present review of literature yields the following conclusions:

With a few modifications, primarily the deletion of age specifications and minority group status, this risk-factor model holds reasonably well for children and adolescents.

Females are extremely important systems and it is important that post -disaster treatment and intervention efforts be aimed at the family unit.

Outreach efforts for intervention services should focus on areas of the community where at-risk individuals and families are most likely to live. Treatment and interventions known to be effective for them should be implemented. It is important to pay attention to issues of diversity. Less intensive services, such as support groups and psycho- educational programs, may be adequate for groups at lower risk.

It is important to provide support to the supporters in families, especially wives and mothers.

Communities might want to encourage groups at very low risk, such as older adults and childless men, to assume a greater share of the burden for the community's recovery by volunteering and participating in professional activities.

5.2 CONCLUSION

Depending on the major findings of the study, the following main conclusions were drawn.

The research base is larger and more consistent for adolescents. More research on many of these topics would be useful and might alter the conclusions reached thus far. At present review literature, questionnaire and focus group discussions yields the following conclusions:

- An adult's risk of psychological distress increases as the number of the following factors increases: Female gender. 40-60 years old, ethnic minority, low economic status, children present at home, For women (the presence of spouse, especially if he is significantly distressed), psychiatric history, severe exposure to disaster, Living in a highly disrupted or traumatized community,
- Families are extremely important systems and it is most important that post disaster and intervention efforts be aimed at the family unit.
- Outreach efforts for intensive services should focus on areas of the community where at-risk individuals and families are most likely to live. Treatments and interventions known to be effective for them should be implemented. it is important to pay attention

to issues of diversity. Less intensive services, such as support groups and psycho-educational programs, can be adequate for groups at lower risk.

- Communities might want to encourage groups at a very low risk, such as older adults and childless men, to assume a greater share of the burden for the community's recovery by volunteering and participating in paraprofessional activities.
- It is important to provide support to the supporters in families, especially wives and mothers.

In view of this, the following recommendations are suggested.

5.3 RECOMMENDATIONS

Based on the findings from the study the following intervention strategies are forwarded to remedy the problem and to minimize posttraumatic stress problems and social problems, which shall be implemented, applicable and coast effective,

Short-term recommendations

1. One of the most important steps you can take is to help adolescents feel safe. If possible, adolescents should be placed in a familiar environment with people that they feel close to.
2. Adults need to create an environment in which adolescents feel safe enough to ask questions, express feelings, or just be by themselves.
3. Reassure adolescents that the state and federal government, police, firemen and hospitals are doing everything possible
4. Infrastructures must be mended

5. Electricity, sanitations, and potable water should be re-set
6. Physical contacts with the outside world (e.g. roadways, phones, and bridges need to be mended

Long-term recommendations

- Since religion is a source of comfort to many in the face of loss of life, property, and sometimes lifestyle, it is important that Churches, Synagogues, Mosques, become active in the recovery of the community during and after disaster.
- When symptoms of distress are prolonged, then referral for individual and group psychotherapy is in order.
- After a disaster, the schools are a natural site for monitoring behavior of children and adolescents even in the aftermath when schools are often used as temporary shelters for families. The school also can be a base for dissemination of written information to parents and students.
- Mass media can be effective in informing and teaching the public of the status of disaster, e.g., where and how to get emergency services
- Providing care and support to their overall stressed parents is the most effective ways to provide care and support to the adolescents affected by disaster
- Educate survivors, and those who come in to contact with them
- Interventions must address both psychological and community /social needs/.

- Therapeutic approach is needed to help adolescents understand and manage their feelings of fear, so that possible negative impacts on their development are minimized.
- Undertake further comprehensive research study in the problem area for the sustainability of adolescents of flood affected Dire Dawa city. In general, the concerned bodies should create a conductive atmosphere to help flood affected people of Dire Dawa. Parental counseling, provision of non-formal education, developing new technology in the area and participation of people Dire Dawa in problem identification and minimizing the problems regarding the influences of disaster, and psychosocial factors are decisive.
- Re settlement programmed should be conducted

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Appendix A

Addis Ababa University

School of Graduate Studies

College of Education

Department of Psychology

Guide Questions for Focus Group discussion

The following Leading Questions for Discussion were presented to Flood affected adolescents

1. Key concepts:

- Concept of psychosocial Problems of flooding.
- Factors related to psychosocial problems of flooding.
- The influence of psycho-social factors on adolescents
- Possible intervention strategies to alleviate the influence the influence of psycho-social factors on Disaster affected adolescents

2. Procedure of the Discussion.

- Preparing 10 Respondents in Advance
- The researcher introduces himself
- Letting the participants to introduce each other
- Brain-storming the participants to introduce ideas about flooding

- Raising questions that will actively involve every members participation
- Chairing the discussion, tape recording the ideas suggested

3. Background information about the respondents

- Sex
- Age
- Educational level

4. Focus group:

- Questions that will be presented to the adolescents

1. How is life in the camps?
2. How has the flood occurred?
3. What have you lost because of the Flood?
4. How do you sense Death?
5. What do you draw in your mind when you hear the word water?
6. What kind of measures was taken to solve your problems?
7. What do you think should be done now?
8. What are the roles of NGO's and religious organizations?
9. What do you think now?
10. How is life in the camps?

APPENDICES

Addis Ababa University
School of graduate studies
Department of psychology

Good morning. the purpose of this questionnaire is to study the psycho-social problems of disaster affected children....in.....the target population for this study is .....Thus, you are selected to participate in the study. Participation in this study is voluntary and everything you say will greatly assist in meeting the goals of this study. Thus, you are kindly requested to give your frank response.

Thank you!

Instructions: - the following questions refer to the expressions that children have in their daily activities .you are asked to indicate on a five point rating scale. The extent of agreement between the feelings expressed in each item and its behavior. Mark /√/ the point which best indicates your agreement.

NO.	Items	Strongly agree	agree	undecided	disagree	Strongly disagree
1	I usually avoid doing work in class					
2	I have wide mood change					
3	Often I get depressed					
4	I feel lonely					
5	I fear school					
6	I often feel dizzy					
7	I see night mares					
8	I feel I am unliked					
9	I am impulsive					
10	I often demand attention					
11	I am inclined to feel that I am a failure					
12	I feel I don't have much to be proud of					
13	I feel that I am a person of worth, on					

	an equal plane with others.					
14	I am often anxious					
15	I am shy and timid					
16	I feel ineffective					
17	I feel as if I never attain my aspiration					
18	I feel incompetent when something bad happens to me					
19	All times I think I am no good at all					
20	I never seem to have the motivation to do things I would like to do.					
21	My sleep is restless and disturbed					
22	I have a hopeless outlook on the world.					
23	I feel chronically frustrated in my personal life					
24	I feel worrying and nervous					
25	Often I feel sick in the stomach					
26	I worry about what is going to happen					
27	I can't concentrate ,can't pay attention for long					
28	I complain of loneliness					
29	I feel sad, with drawn					
30	I usually shout for no reason					

Interview

1. *What are the main aims of organization?*
2. *What kind of measures are taken to solve the psycho-social problems of flood affected*
   People?
3. *What are the major problems you are facing?*
4. *What are the reactions of the community?*
5. *What do you think should be done to overcome such problems?*
6. *Do responses to disaster vary by gender?*
7. *How do they sense death of parents or loved ones?*
8. *How do flood affected order their lives and relationships?*
9. *How can responders offer the prospect of inducing positive psychological changes that*
   Facilitate recovery from illness?
10. *How do we help children cope with crisis*
11. *Do youngsters show abrupt shift in relationships?*

የአዲስ አበባ ዩንቨርሲቲ/ኮሌጅ
የድህረ ምረቃ ትምህርት ቤት
የሳይኮሎጅ ትምህርት ክፍል

እንደምን አደርህ/ሽ! የዚህ መጠየቅ አላማ በጎርፍ የተፈናቀሉ የድሬድዋ ወጣቶች የሚያጋጥ ቸውን የሥነልቦናዊና ማህበራዊ ችግሮች ለማጥናት ነው ስለዚህ ጥናት የሚፈለጉት ከ15-17 አመት እድሜ ያላቸው ወጣቶች ሲሆኑ አንተ/ች በዚህ ጥናት እንድትሳተፍ/ፊ ተመርጠህል/ሻል ብዚህ ጥናት ውስጥ የምትዳርገው/ጊው ተሳትፎ በፈቃደኝነት ላይ የተመሰረተ ሲሆን የምትሰጠው/ጪው መረጃ በምስጢርነት ይያዛል። የአነተ/ች ትክክለኛ ተሳትፎ ለጥናቱ አላማ መሳከት ከፍተኛ አስተዋፅኦ ሰለሚኖረው የምታምን/ኝ በትን ትክክለኛነው የምትለ/ይ ውን ሐሳብ /// በማድረግ እንድትተባበር/ሪ/ኝ በትህትና እጠይቃለሁ።
አመሰግናለሁ!

መመሪያ ከዚህ በታች ያሉት መጠይቆች ልጆች በየእለቱ የሚያጋጥማቸውን ነገሮች የያዙ ናቸው። በ5ረድፍ ከተሰጡት መመዘኛዎች በጣም የምትስማሙበትን አንድ /// በማድረግ አሳዩ።

1)እድሜ ---------- 2)ፆታ---------3)የትምህርት ደረጃ----------

2)የቤተሰብ ሁኔታ 1.አባትም እናትም አለ----------2.እናተ ብቻ አለች-------

3.አባተ ብቻ አለ----------

3)ወንድምና እህቶች----------እህቶች----------ወንድሞች

4)ከጎርፍ አደጋው በፊት የቤተሰቦችህ(ሽ) ሥራ----------

ተ.ቁ		በጣም እስማማለሁ	እስማማለሁ	አልወሰንም	አልስማማም	ምጣም አልስማማም
1	የክፍል ሥራዎችን ክፍል ዉስጥ አልሰራም					
2	ብዙ ጊዜ ይደብረኛል					
3	ብቸኝነት ይሰማኛል					
4	ትምህርት ቤት ስገባ እፈራለሁ					
5	አንዳንዴ የመደንዘዝ ስሜት አለኝ					
6	ሌሊት እቃገራለሁ					
7	ሰዎች የማይወዱኝ እንደሆንኩ ይሰማኛል					
8	እንደየሁኔታዉ የባህሪ ለዉጥ አሳያለሁ					
9	ነጭነጫ(ጠብ ጫሪ) ነኝ					
10	ሰዎች ትኩረት እንዲሰጡኝ እፈልጋለሁ					
11	ነገሮች አይሳኩልኝም ብዬ በራሴ እገምታለሁ					
12	በራሴ ብዙም የምኮራበት ነገር እንደሌለኝ ይሰማኛል					
13	እንደሌሎች እኩል ዋጋ ያለኝ ሰዉ መሆኔ ይሰማኛል					
14	እኔ ብዙ ጊዜ ጉጉ ነኝ					
15	አይናፋርና ለማዳ ነኝ					
16	ብቃትየሌለኝ ልጅ መሆኔ ይሰማኛል					
17	አስብሁት ግብ መድረስ የማልችል መሆኔ ይሰማኛል					
18	ችግሮች ሲገጠመኝ መወጣት የማልችል መሆኔ ይሰማኛል					
19	ጥሩ ሰዉአይደለሁም ብዬ አስባለሁ					
20	ማድረግ የምችለዉን ለማድረግ					

	ተነሳሽነቱ የለኝም					
21	የሌሊት አዳሬ እረፍት የሌለዉ የተረበሸ ነዉ					
22	አለምን ተስፋ በመቁረጥ አያታለሁ					
23	በግል ህይወቴና በዕድሜዬ ተስፋ መቁረጥ ይሰማኛል					
24	እጨነቃለሁ የምይዘዉ የምጨብጠዉም አጣለሁ					
25	በአብዛኛዉ ህመም(የሆድ ህመም) ይሰማኛል					
26	ምን ይመጣ ይሆን? የሚለዉ ያስጨነቀኛል					
27	ለብዙ ደቂቃ ሀሳቤን አነድ ቦታ ማሰባሰብ አልችልም					
28	ስለብቸኝነቴ አማረራለሁ					
29	ሐዘንና ትክዜ ይሰማኛል ገለልተኛ መሆን እፈልጋለሁ					
30	ያለበቂ ምክንያት እናደዳለሁ እጮሀለሁ					

1.አያጋጥምህ(ሽ) ብሎች ችግሮች መከከል 5ቱን ጥቀሽ(ሺ)

1. ----------
2. ----------
3. ----------
4. ----------
5. ----------

2.እነዘህ ችግሮች እንዴት ይቃለላሉ ብላችሁ ታምናላችሁ?

3.ከእርዳታ ሰጭዎች በቂ እገዛ አግኝታችኃል?

Open-ended questions for respondents.

1. What are the five major problems that you are facing now?
   1. .....
   2. .....
   3. .....
   4. .....
   5. .....
2. How do you think these problems could be solved?

   .....

   .....

   .....
3. Do you think you get enough assistance from caretakers?

   .....

DECLARATION

I the undersigned, declare that this thesis is my original work and has not been presented for a degree in any other University and that all sources of material used for the thesis have been dully acknowledged.

Name *Nebeyou Yohannes Ferede*

Signature----------

Place *Department of Educational Psychology*

Addis Ababa University, Addis Ababa

Date of Submission: July 9, 2007

DECLARATION

I, the undersigned, declare that this thesis is my original work and has not been presented for a degree in any other University and that all sources of material used for the thesis have been dully acknowledged.

Name: Nebeyou yohannes Ferede

Signature: ----------

Place: Department of Educational Psychology Addis Ababa University,

Addis Ababa

Date of Submission: July 9, 2007

This thesis has been submitted for examination with my approval as a University Advisor.

Dr. Yusuf Omar Abdi