

# Disasters



# Disasters:

## *Mental Health Context and Responses*

Edited by

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Disasters have been with us since time immemorial and they will continue to be our companions in life. We can **prevent** some of them, **mitigate** the effects of others and **tolerate** the rest. We have to adjust our lives to their threat and to their actual occurrence and learn how to live with them.

Disasters have a serious impact on mental health, ranging from “normal” or even “beneficial” to psychopathological (either of *general* nature such as onset or exacerbations of pre-existing psychopathology or of *specific* nature such as acute stress reaction or PTSD). Victimization of those affected is yet another unwanted consequence that should be avoided if we do not want chronicity to develop.

The psychological effect of a disaster is greatly influenced by the **meaning** ascribed to the traumatic event. This meaning to a great degree determines whether individual behaviours will be “dysfunctional” or “adaptive” and explains why human-made disasters have greater psychopathological impact than natural disasters.

It is not only the directly traumatized persons that are psychologically affected by a disaster. Rescue teams, police, paramedics, hospital personnel, ambulance drivers, by-passers, cleaners of the site of a disaster, even people watching a disaster on TV may be affected. The families of traumatized people are also likely to be adversely affected and may need help.

Issues such as early predictors of psychopathology following a disaster, efficacy and risk of available therapeutic methods (e.g. the controversial issue of debriefing), the importance of risk and protective factors, the effectiveness and cost-effectiveness of preventive programmes, the effectiveness and cost of organizing mental health services for disasters and the paradoxically positive effects of disasters for some people are all important areas where further research may reveal important information.

At a personal but also at a social level the response to disasters of every kind is associated with certain personal and social qualities that should be reinforced before, during and after a disaster. **Resilience** and **solidarity** are the most important among them: resilience at a personal level and solidarity at a social level.

The prioritization that the mental health aspects of disasters deserve is an issue of great importance. As is the case with other areas in health provision, mental health is not given the priority it deserves in terms of

funding and attention. It is paradoxical that although vulnerable people in the community and mentally ill patients are more at risk than other people during periods of economic crises, yet it is very often *mental* health services that are curtailed more severely during these periods. It is disheartening that this attitude is adopted not only by government officials but also by the public.

The aim of this volume is to throw light on some important aspects of disasters. The volume has three inter-related but distinct parts:

- 1. Natural Disasters**
- 2. Human-made (or Man-made) Disasters**
- 3. Economic Disasters**

The addition of Economic Disasters to the classical categorization of disasters into Natural and Human-made arises from the recent catastrophic developments in the world economy. Are these disasters not human-made? In essence yes, although other factors may also contribute. Yet, the nature of even the two classical categories is also not clearly defined. There is certainly a human contribution to natural disasters and the situation becomes even more complex when the above two or even three categories of disasters co-occur – a not so rare phenomenon.

The **Natural Disasters** section of the volume incorporates contributions related to disasters of this kind that have occurred in various parts of the world: Earthquakes in Greece and Turkey (Oikonomou et al., Gökalp and Kalkan) droughts, floods, cyclones and earthquakes in India (Sharma) and earthquakes and floods in Pakistan (Javed) are some paradigms. These disasters are differentiated with reference to two basic parameters, namely the nature of the disaster and the population affected by it. The interaction of these two parameters (with the additional contribution of other factors) produces a great variety of manifestations and management possibilities.

The person-centred perspective in disasters is covered by Mezzich and Morales who also deal with the Latin American experience in disaster response.

Special reference is made to the effect of natural disasters on women (Niaz) and to military personnel assigned to humanitarian assistance (West and Morgenstein).

Benyakar and Collazo examine the general principles in the psychosocial management of damaged people in disasters and Coskun deals with the opportunity but also the need to study disasters from an educational perspective.

Lastly, Pervanidou and Chrousos deal with the neurobiology of one of the major clinical consequences of natural disasters, post-traumatic stress disorder.

The **Human-made Disasters** section of the volume is comprised of chapters pertaining to the mental health of civilians in war (Karam et al.), mental health care during conflict situations in developing countries (Murthy), the mental health consequences of the dramatic conflict situation in Syria (Mobayed and Abou-Saleh) and the mental health of clean-up workers following the Chernobyl disaster (Krasnov et al.).

Baron et al. highlight neglected factors in addressing violence as a man-made disaster, Zemishlany addresses the issue of resilience and vulnerability in coping with terrorism and political violence and Wenzel et al. deal with public health and international law in man-made disasters.

Lastly, Lecic-Tosevski et al. deal with the intrapsychic and diachronic trans-generational consequences of the trauma produced by human-made disasters.

The third part of the volume pertains to the mental health consequences of a disaster that has appeared with great and persistent magnitude in the last few years, the **Economic Disaster**. This disaster is responsible for the production of psychopathology *de novo*, for relapses of pre-existing psychopathology and for a deleterious effect on the well-being and the quality of life of the populations that are affected by it. In some cases (such as Greece recently) the economic disaster is associated with the catastrophic consequences of man-made disasters occurring elsewhere but resulting in waves of refugees that further impact on the psychosocial condition of both the refugees and the citizens of the host country. Parenthetically, the way in which Europe will respond to the ongoing refugee crisis represents one of the greatest ethical challenges of our century.

The impact of economic crises on health in general is examined by Rachiotis, a vista of economic disasters from an individual and systemic

perspective is provided by Nikos Christodoulou, their impact on mental health is addressed by Economou et al., the suicidality associated with economic disasters is examined by Tsitsipa and Fountoulakis, criminality and suicidality at the onset and during the financial crisis in Greece are dealt with by Tsouvelas et al., and Malogiannis and Efthimiou deal with the coverage of suicide by the mass media during the recent Greek economic crisis.

The suicide of farmers in India is examined from a sociological perspective by Kallivayalil and alternative explanations for this morbid phenomenon are discussed.

Lastly, viewing disasters in an artistic context, Krasanakis deals with catastrophe in theatre from a psychoanalytic perspective.

We want to thank all the distinguished authors who have contributed to this volume. We feel confident that their contributions will be greatly appreciated by the readership.

We would also like to thank Ms Helen Gretsas and Ms Androniki Gatzelaki of the Hellenic Psychiatric Association for their expert administrative and secretarial contribution, Ms Electra Christodoulou for the beautiful cover design of the book and for the designs of the preface and of the part pages separating the chapters and Ms Dimitra Stasinopoulou who has kindly offered to us two of the photographs that are included in this volume.

We hope that this volume will promote our knowledge and awareness of disasters of every kind and will increase our preparedness to prevent or at least mitigate their serious and often incapacitating psychosocial effects. We also hope that our book will stimulate further research, broader and more case-specific dissemination of information and more appropriate, holistic and person-centred management of people affected by them.

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# DISASTER PSYCHIATRY IN GREECE: MENTAL DISORDERS AND PSYCHOLOGICAL DISTRESS ASSOCIATED WITH EARTHQUAKES

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## **Abstract**

Natural disasters are fairly common events and their incidence is increasing over time. The consequences of natural disasters vary around the globe, depending on the region and its economic development. According to the data collected in the Emergency events Database (EM-DAT), earthquakes have claimed an average of 27,000 lives per year since 1990 and clearly have had serious psychological, economic and social consequences on the affected communities. Earthquakes constitute a common type of natural disaster in Greece due to its high seismic activity. Several epidemiological studies have been conducted over the past 30 years focusing on the prevalence of psychological reactions and mental disorders among populations exposed to earthquakes in Greece. The

common finding of these studies is the detection of acute stress reactions, post-traumatic stress disorder, anxiety and depressive symptoms. The prevalence of mental disorders and the psychological symptoms following exposure to the most destructive earthquakes in Greece are reported and a paradigm of intervention is provided.

## **Introduction**

Natural disasters occur worldwide every day and there is growing concern that exposure to natural disasters is inevitably increasing globally (Grid-Arendal, 2012). A substantial body of literature has been accumulated during the past decades addressing their devastating consequences on the mental health of large populations and their psychosocial implications as well (Norris et al., 2002). Emotional distress and post-traumatic symptoms occur frequently either during the immediate or during the later post-impact phases in response to various disasters (Riddle et al., 2007).

In the present contribution the psychological impact concerning the five major destructive earthquakes that took place in Greece during the last sixty years is reviewed.

## **Overview of epidemiological data**

Since 1988, the Centre for Research on the Epidemiology of Disasters (CRED) at the Catholic University of Louvain, Belgium has been maintaining an Emergency Events Database (EM-DAT) with the support of the UN, the World Health Organization (WHO) and the Belgian government, with its primary goal being to enhance regional, local and national capacity to prepare for and respond to disaster events. EM-DAT provides standardized data on disaster occurrence around the world.

The overwhelming majority of people affected or killed by natural disasters reside in developing countries, particularly in the Asia-Pacific region (Cavallo, 2009). Epidemiological data show that 96% of the people killed and 99% of the people affected by natural disasters over the period 1970–2008 were in the Asia-Pacific region, Latin America and the Caribbean, and Africa (Cavallo, 2009).

As far as Greece is concerned, available data on the EM-DAT country profile from 1900–2015 show that earthquakes, extreme temperature conditions, storms with flooding and wildfires have taken place, with 2001

deaths reported and 1,006,860 people affected in total (i.e., the sum of injured, homeless and people requiring immediate assistance during a period of emergency, including displaced or evacuated people).

### **Countries with greatest earthquake occurrence and consequences: 1980–2009**

<b>Country</b>	<b>No. of earthquakes</b>	<b>No. killed</b>	<b>No. affected (millions)</b>	<b>Economic damage (billions US\$)</b>
China	94	89,852	86.5	88.6
Indonesia	74	178,742	8.4	11.3
Iran	62	74,020	1.8	10.4
Turkey	34	20,495	5.9	22.8
Japan	31	5,753	0.8	145.7
Afghanistan	25	9,175	0.5	0.03
United States	23	145	0.1	38.6
Peru	22	1,095	1.3	0.9
Greece	20	244	0.3	6.7
Pakistan	20	74,278	6.5	5.2

More than 1.4 million earthquakes per year take place around the planet, approximately averaging 4,000 per day. Earthquakes have claimed an average of 27,000 lives a year since 1990 and they were responsible for 29% of natural disaster-related deaths in the last 30 years (Cred Crunch Issue, 2010). Earthquakes are considered to be among the most devastating natural disasters because they are unexpected and can cause massive destruction. Their consequences vary around the globe depending on the region and its economic development (see table below) (Cred Crunch Issue, 2010).

### **Earthquakes in Greece since 1950**

Greece is characterized by a high level of seismic activity. Since 1950 five destructive earthquakes have hit Greece.

On 7 September 1999, an earthquake measuring 5.9 on the Richter scale hit the city of Athens and the larger metropolitan area. The most heavily damaged area lay within a radius of 12 km from the epicentre. The main earthquake was followed by a series of aftershocks of a smaller magnitude

that lasted for a couple of weeks. The earthquake caused 152 deaths, 700 injuries and left approximately 40,000 families homeless (www.emdat.be).

On 15 June 1995, a 6.1 Richter earthquake hit the city of Egion in the northern Peloponnese. Numerous houses were destroyed, 26 people were reported dead and 20,000 had to relocate for several weeks (www.emdat.be).

On 13 September 1986, a 5.9 Richter earthquake struck the city of Kalamata in the southern Peloponnese. Material damage was extensive within the city limits, as well as in the nearby villages; twenty-four people lost their lives and 330 more were injured (1/4 of them required hospitalization). Many aftershocks followed, the strongest (5.4 Richter) occurring two days later with its epicentre within the town limits. This aftershock caused 37 more injuries and further damage to the already weakened buildings. Approximately 3,150 buildings were destroyed and 10,000 people were left homeless (www.emdat.be).

On 20 June 1978, the city of Thessaloniki was hit by an earthquake with a magnitude of 6.4 on the Richter scale. The death toll was 50 people and another 600,000 were affected (www.emdat.be).

On 12 August 1953, a 7.2 Richter earthquake took place in the islands of Cephallonia and Zakynthos. Approximately 455 deaths and 4,400 injuries were recorded, and 35,440 people were left homeless. More than 70% of the buildings on the island of Cephallonia were destroyed (www.emdat.be).

## **Mental disorders and psychological impact of earthquakes**

Several epidemiological studies have been carried out exploring the psychological consequences of natural disasters. The people affected are at increased risk of developing acute stress reactions, post-traumatic stress disorder (PTSD), anxiety disorders, depression, and substance use disorders that can last for years following the natural disaster (Norris et al., 2002). It is reported that PTSD may be observed in 32–80% of the adult and in 26–95% of the child population following an earthquake (Kolaitis et al., 2003). In most cases, PTSD coexists with one or more mental disorders and with poorer physical health (Foa et al., 2006). The rates of PTSD appear to be much higher in developing countries (Bonanno et al., 2010). Although psychopathology may be long-lasting, studies investigating long-term outcomes after an earthquake are rare (Bland et al.,

2005). In a study of 526 survivors of the 1999 earthquake that hit Turkey, the rates of PTSD and depression four years after the disaster were 25% and 11% respectively (Kilic et al., 2006). The strongest predictors of PTSD are the intensity of fear during the earthquake, previous exposure to traumatic events, female gender, younger age, being married, and the loss of kin (Kilic et al., 2006).

In general, women report higher levels of distress following earthquakes but may achieve more positive outcomes compared to men (Fergusson et al., 2015). The literature examining resilience and post traumatic growth has suggested that some individuals exposed to traumatic events may experience long-term positive consequences in terms of personal growth, improved interpersonal relationships and increased community cohesion (Peterson et al., 2008).

A number of epidemiological studies have been carried out over the past three decades in Greece focusing on the prevalence of psychological reactions and psychiatric disorders in populations exposed to earthquakes.

Following the earthquake that hit the Athens metropolitan area in 1999 a study was conducted in 102 help-seekers (Christodoulou et al. 2005, Soldatos et al. 2006). Psychopathological symptoms during a three-week period after the earthquake were reported and the subjects were assessed based on a checklist of socio-demographic variables and a semi-structured interview for the detection of acute stress reaction (ASR) and PTSD using the ICD-10 diagnostic criteria. The study showed that 85.3% of the subjects fulfilled the ICD-10 diagnostic criteria for ASR (30 for a mild, 29 for a moderate and 28 for a severe reaction) and 43% for PTSD. Almost all subjects diagnosed with PTSD had suffered ASR initially, and ASR was found to be the only significant predictor for PTSD. Accelerated heart rate and feelings of derealization within the first 48 hours following the earthquake appeared to be the principal factors associated with the development of early PTSD. A limitation of the study was the lack of a long-term follow up and the use of a non-random sample of subjects seeking help at a special psychological support unit. Christodoulou et al. (2003) pointed out that the early reactions to a major traumatic event consist primarily of “non-specific” symptoms of stress response and autonomic hyperarousal symptoms rather than dissociative symptoms, a finding corroborating other studies (Marshall et al. 1999).

In a study by Livanou et al. (2005), 157 survivors of the 1999 Athens earthquake were assessed by the Traumatic Stress Symptom Checklist four

years after the earthquake. A substantial proportion of the survivors experienced symptoms of PTSD and depression. Approximately 22% of the survivors reported moderate or severe subjective distress and 15% marked interference with social, occupational and personal adjustment due to their symptoms. The intensity of fear during the earthquake and participation in rescue operations were related to greater psychological distress. This study showed that earthquakes of a relatively low magnitude and few casualties can lead to long-lasting psychological effects in some survivors.

Giannopoulou et al. (2006) in their study six months after the 1999 Athens earthquake included 2,037 children, aged 9–17 years. Girls reported significantly more PTSD, anxiety and depressive symptoms than boys. Also, younger children reported significantly more PTSD and anxiety symptoms than older children. The severity of PTSD symptoms was most strongly predicted by greater perceived threat during the earthquake, whereas depression was most strongly predicted by the level of post-earthquake adversity.

In a school-based study by Roussos et al. (2005), one of the largest post-earthquake screenings of children and adolescents after a disaster, 1,937 students, aged 9–18 years, were assessed three months after the 1999 earthquake in two differentially affected cities in the Greater Athens Area, one at the epicentre and another 10 km away from the epicentre. The estimated rates for PTSD and depression for both cities combined were 4.5% and 13.9% respectively. Prior disaster studies have found the rates of depression to be similar to or lower than the rates of PTSD, although in survivors with lower levels of traumatic exposure the rates of depression have exceeded the rates of PTSD (Goenjian et al., 2001). In the Roussos et al. study (2005), the strongest predictor of the severity of PTSD reactions was depression (explaining 27% of the variance), followed by the severity of subjective earthquake-related experiences. A significant minority of students in each city, mainly boys, reported having vengeful thoughts after the earthquake. In a follow-up study conducted by Goenjian et al. (2011) in 511 adolescents 32 months after the 1999 Athens earthquake, PTSD scores had considerably subsided, as also reported in previous studies, but 8.8% were still experiencing moderate to severe levels of symptoms and 13.6% met criteria for depression. This study showed that repeat screening is recommended after a natural disaster to identify adolescents who continue to experience symptoms.

Kolaitis et al. (2003) assessed 115 children attending two elementary schools located at the epicentre of the 1999 earthquake six months after the disaster. A control group of non-exposed children to the earthquake was used for comparison of psychopathology. The study showed a high rate of severe to mild PTSD symptoms (78%) among children exposed to the earthquake. Severe or moderate PTSD symptoms were associated with high levels of depression. Those who were most likely to be affected were children alone at the time of the earthquake and children who, or whose families were either injured or had homes damaged.

In another study by Groome et al. (2004) 178 children from three districts of Athens were assessed five months after the 1999 Athens earthquake. PTSD and anxiety symptoms were significantly related to proximity to the epicentre, exposure to threat and female gender; these results are in agreement with previous studies. In the region closest to the epicentre, the younger children reported the highest PTSD and anxiety symptoms, but in the group furthest away from the epicentre, the older children reported the highest PTSD and anxiety scores, reflecting age differences in sensitivity to direct or indirect experience of the earthquake.

In a study by Psarros et al. (2013) PTSD was detected in 42.3% of a sample of 97 randomly chosen victims one month after an earthquake of 6.1 on the Richter scale that hit the city of Egion (Peloponnese, Greece) in 1995. The prevalence of PTSD was similar to the prevalence reported by other authors in previous epidemiological studies. In terms of general psychopathology, the most significant factors associated with the early development of PTSD were high anxiety levels, compulsive symptoms and symptoms of phobic anxiety. These findings are in agreement with the high prevalence of panic disorder, social phobia and specific phobias that have been reported in the literature (Onder et al., 2006).

Acute stress reaction (ASR) was diagnosed in 70% of a sample of 91 subjects immediately following the 1995 earthquake in Egion; in the majority of the subjects ASR persisted beyond the initial 48 hours following the earthquake, due to continued aftershocks (Bergiannaki et al., 2003). People with a protracted ASR reported significantly more severe material damage and disruption of their social network, had a history of medical illness, and had higher trait anxiety levels. The persistence of ASR related positively to the fear of death at the time of the earthquake and the levels of pre-existing anxiety.

Papadatos et al. (1990) conducted a study on a randomly selected sample of subjects divided into three groups that consisted of 205 adults, 172 high school students and 69 outpatients from the Kalamata General Hospital with minor pathological problems or on regular check-up, two weeks following the 1986 Kalamata earthquake. It was shown that the majority of the subjects exhibited a significant degree of anxiety, depression and psychosomatic symptoms; students adjusted better to the negative impact of the earthquake compared with the other groups.

Lazaratou et al. (2008) reported on the psychological impact of the 1953 Cephallonia earthquake in a sample of 121 survivors, fifty years after the event. In this retrospective study it was shown that the majority of the victims (78%) acknowledged a strong overall impact of the earthquake on their lives with the experiencing of intense recollection of the event at anniversaries; the most frequent symptom during the first six months following the earthquake was persistent remembering or reliving of the event. Women and young adults at the time of the earthquake were at greater risk of psychological distress compared to men. Studies on the long term effects of natural disasters show that approximately one third of the survivors are still suffering from PTSD one to three decades after the catastrophic event (Green et al., 1992).

Finally, Hartocolis (1955) was the first to assess the psychological consequences of earthquakes in Greece in a study following the 1953 earthquake on the island of Cephallonia. In his study most people reported fear of dying and many psychopathological symptoms.

## **A Paradigm of Crisis Management**

An example of a contribution to the management of a crisis due to a disaster is presented here.

Within the first three days following the Athens 1999 earthquake, many psychological support agencies of the public and private sector in the Athens area were mobilized to help.

We will describe here the interventions carried out by the Athens University Department of Psychiatry, at that time under the chairmanship of Prof. George Christodoulou (Christodoulou et al. 2005).

The special service for psychological support of earthquake victims of the department formed three psychosocial support units, as follows:

- Two units posted within the most severely hit regions
- One unit centrally located at Eginition Hospital (main facility of the Department of Psychiatry in the downtown Athens area)
- A telephone helpline unit

These units were staffed by mental health professionals of the University Department who volunteered to serve in this capacity and the telephone helpline unit was staffed by psychiatric trainees under supervision.

The scope of the units was to provide information, reassurance and relief from the traumatic experience. The goal was not only prevention of post-traumatic stress disorder (PTSD) but also management of acute stress reactions, depression and other maladaptive psychological and behavioural reactions, as well as simply aiding management of grief, an adaptive response to the disaster.

Supportive psychotherapy and pharmacotherapy with anxiolytics and antidepressants were mainly administered. Exacerbations and relapses of psychotic conditions were managed with medication and support.

Particular emphasis was attached to fostering resilience, a basic concept in prevention and mental health promotion. Ventilation of feelings was encouraged but this did not take the form of abreactions such as debriefing, in view of evidence indicating that this technique does not help very much and may even have a negative effect, unless applied in selected cases. On the contrary, elementary training in coping skills, as well as provision of information on the expected stress response, traumatic reminders and normal versus abnormal functioning were implemented. In selected cases, anxiety reduction techniques to decrease physiological arousal were utilized. Follow-up was carried out as appropriate by the staff of the Outpatients' Department of Eginition Hospital.

We believe that the above scheme had a positive effect as an emergency intervention and possibly in the long run as well.

## **Conclusions**

Earthquakes are a common type of natural disaster with devastating psychological, social and economic consequences. In Greece, earthquakes are a frequent phenomenon due to the geological structure of the region and its high levels of seismic activity (Christodoulou, 2002). Five destructive earthquakes have hit the country since 1950. There has been an

increase in the number of epidemiological studies over the past 30 years pertaining to the psychological impact of earthquakes in Greece. Most reports were on the 1999 Athens earthquake and were conducted both on adult and children/adolescent populations. The large majority of survivors in all studies were found to have developed depression, anxiety, acute stress reaction and PTSD. Identifying highly symptomatic individuals with history of previous exposure to traumatic events should be a priority for health care professionals and psychological support staff in order to undertake the appropriate intervention.

Several studies have reported on the prevalence of chronic psychological symptoms after exposure to earthquakes (Bland et al., 2005; Onder et al., 2006), confirming the need for long-term psychosocial care of survivors. Given the high prevalence of psychopathology in both adults and children following an earthquake, actions should be taken to manage their aftermath and specialized mental health services should be available for survivors of natural disasters both in the short and long term.

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# THE DYNAMICS OF PSYCHOSOCIAL INTERVENTIONS IN NATURAL DISASTERS: EXPERIENCES FROM TURKEY

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## **Abstract**

A disaster disrupts normal living conditions and causes enormous suffering for the affected community. If sufficient preventive measures are taken, the situation may be an emergency but not a disaster. Humanitarian aid and support in the post-disaster period is considered a duty for the international community, since no society/country is immune from experiencing a disaster or conflict and everyone will take their turn in giving and receiving help. The basic principles of humanitarian aid – impartiality, neutrality and independence – are the sine qua nons of ethical conduct in serving the needs of survivors. Although aid efforts originate from principles of solidarity among people, under certain conditions, social, political, economic and military influences may undermine the outcome of efforts made by humanitarian organizations. In this paper, social and psychological dynamics within and between the survivor community and the rescue and aid staff will be discussed with special focus on two large earthquakes (Marmara, 1999 and Van, 2011) that took place in Turkey.

## **Introduction**

Disasters cause significant losses for the individual and the community and to nature. Even though natural disasters are defined as those which originate from natural causes such as earthquakes, floods, volcanic eruptions and hurricanes, in most of them a human hand can be found. In

some of these disasters, the situation may be unpredicted but foreseeable, as with hurricanes, some earthquakes or floods. The number of deaths reported in underdeveloped regions is much larger than in developed ones and this implies the influence of the multifaceted preparedness of the community (Steinberg, 2000).

The definition of a disaster, according to the World Health Organization, is “an occurrence disrupting the normal conditions of existence and causing a level of suffering that exceeds the capacity of adjustment of the affected community” (WHO/EHA, 2002). Therefore, with sufficient preventive measures and preparedness, the situation is an emergency but not a disaster. Disasters that affect the whole community cause a disruption to social and economic functions.

In this paper, social and psychological dynamics within and between the survivor community and the rescue and aid staff will be discussed, with special focus on two large earthquakes (Marmara, 1999 and Van, 2011) that took place in Turkey.

### **Marmara 1999 and Van 2011 Earthquakes**

The north-western part of Turkey, the Marmara region, was struck by an earthquake of 7.4 on the Richter scale on 17 August 1999. The area was the most populated area of Turkey, with many of the country’s important industrial facilities. Eighteen thousand people were killed, approximately 50,000 were injured and many were left homeless and lost relatives.

In the early period after the quake, voluntary rescue staff and medical personnel under the umbrella of the Turkish Medical Association were in the disaster area within hours, especially from Istanbul where the majority of the health and rescue workforce is located. In spite of heroic efforts and donations both from national and international communities, the institutional and state organizational capacity was not sufficient in the early period.

Mental health professionals were well organized under the leadership of the Turkish Psychologists Association and the Psychiatric Association of Turkey, with the support of Universities. The Marmara earthquake was a very significant experience regarding the insufficiencies and lack of a national organization that could manage the volunteers and government officers from the earliest period to the recovery phase.

Van is one of the eastern cities in Turkey, covering a large area and with a population of approximately one million. The earthquake struck Van with a magnitude of 7.1 on 23 October 2011 and on 9 November 2011, with a magnitude of 5.7. The earthquake killed 604 and injured 4,152 people. Furthermore, around 60,000 became homeless.

The state institutions and non-governmental volunteer organizations were much more organized compared to the Marmara earthquake. An umbrella organization was founded in 2006 for disaster psychosocial services named APHB (Association for Disaster Psychosocial Services) that included the Turkish Psychologists' Association, Psychiatric Association of Turkey, Turkish Red Crescent, Associations of Social Workers and Counsellors. Later, in 2009, AFAD (Disasters and Emergency Situations Management Directorate) was founded and organized countrywide across cities through connection to city governors.

## **Insights into the Settings for Support and Help-Seeking Behaviour**

Humanitarian aid and action is linked with the service provision of humanitarian organizations in temporary disaster and conflict situations. The basic principles of humanitarian aid are impartiality, neutrality and independence. At this point, the concept of **humanitarian space** comes to the fore to define the environment “where humanitarians can work without hindrance and follow the humanitarian principles of neutrality, impartiality and humanity (Hilhorst and Jansen, 2010).

Humanitarian space has both physical and metaphorical dimensions. The physical settings include refugee camps, camps for disaster survivors, spaces where healthcare is provided for those in need of aid and certain grounds or vehicles to which people are transferred for greater safety. Humanitarian space is also a place where help providers are able to work without danger of attack.

Unfortunately, many humanitarian spaces become either militarized under certain conditions or may be used for political reasons. The United Nations and its components, Red Cross/Red Crescent organizations, and the NGO Codes of Conduct all work under the basic principles of impartiality, neutrality and independence. Humanitarian assistance also mobilizes and urges authorities and official bodies to fulfil their responsibilities under ethical and humane conditions. During post-disaster periods, aid

organizations have to negotiate and conduct diplomacy with official bodies and survivors of disasters.

The Codes of Conduct for the Red Cross and Red Crescent emphasize the principles of accountability, participation, partnership, vulnerability reduction and respect for culture and/or professional standards. Therefore, during the humanitarian encounter between the aid providers and seekers, the aid providers in particular have to take certain points into consideration: aid recipients are generally vulnerable, but they are also labelled as helpless and passive (code of conduct in disaster relief, 1994).

The protection of disaster survivors from further hazards is the main objective of aid. This involves the provision of food, shelter, healthcare, sanitation and water. If the period to return to normal life lasts longer, opportunities for education, vocational activities and protection of the vulnerable such as children, the elderly, and former physical and psychiatric patients should be implemented.

There are examples of clashes between International NGOs (INGO) and states or governments of disaster-struck countries. During the 2004 Indian Ocean Tsunami, it was reported that the INGOs were accused of promoting the aspirations of Western countries rather than helping the locals (Hilhorst and Jansen, 2010). These disagreements may make the disaster survivors feel distrust and undermine the help that they would normally get from available resources.

The **Sphere** Project was founded in 1997, by a group of humanitarian NGOs and the Red Cross and Red Crescent. The core beliefs are that disaster or conflict survivors have a right to live with dignity, and therefore a right to assistance. Humanitarian aid is not just the charity of merciful people, but it is the right of the people who have faced a disaster or a war. This conceptualization will balance the power inequalities in humanitarian spaces, and will enable aid providers to include the affected population more in the support processes, decision making mechanisms and dissemination of aid (5).

### **Notes from the Van Disaster Area**

The Van earthquakes took place in October and November 2011. It was winter time and providing warm shelter to the survivors was not easy, despite the efforts of international and national governmental and non-governmental humanitarian organizations. The area with a mainly Kurdish