



## Deprem Sonrası Psikoloji ve Sosyal Yaşam

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1999'dan bugüne tam 20 yıldır ülkemizde sadece deprem değil sel, fırtına ve kuraklık gibi birçok doğa olayı olmuştur ve bundan sonraki 20, 30, 50, 100, 1000 yıl daha olmaya devam edecektir. Dünya varolduğu sürece bu olayların olacağı kaçınılmaz bir gerçek olduğuna göre, "önlem almamak, alamamak" bu doğa olaylarını afetler olarak yaşamamızın başlıca sebebidir. Bu araştırmanın amacı; En büyük felaketlerden birine yol açan depremlerden sonra ölmeyi başarıp hayatta kalan hem özel gereksinimli bireylere, hemde psikolojik desteğe ihtiyacı olan insanlara nasıl bir yaklaşım içinde hareket edebiliriz diye düşünmemizi sağlamak ve bir yöntem geliştirmeye çalışmaktır. Çalışmamıza, 17 Ağustos ve 12 Kasım 1999'daki depremler sonrasında Düzce'de travma sonrası stres bozukluğu tanısı konan ve doktorlardan izin alarak ulaşabildiğimiz 17 hasta ile birlikte depremlerden sonra İzmir'e göç etmiş ve aynı teşhis konulan 8 hasta üzerinde uygulanan tedaviler ve anlatımlar temel oluşturmaktadır. Bu kişilerden yola çıkarak, depremden sonra psikososyal anlamda nasıl bir yol takip edileceği ile ilgili çalışmalar yapılmaya çalışılmış ve hala çalışılmaktadır. Başta görevli kişiler olmak üzere, hem doktorların hemde akademisyenlerin oluşturabileceği ekipler sayesinde olası deprem felaketinin etkilerinin daha çabuk bir şekilde minimuma indirilebileceği düşünülmektedir. Sonuçta, belki de bugünden sonra depreme bakış açımız değişecek ve hatta böyle bir felaketle karşılaşmadan önce ve karşılaştıktan sonra neler yapılabileceği ile daha uygulanabilir bir yöntem oluşturulmuş olacaktır.

**Anahtar Kelimeler:** Deprem, Doğa olayı, Afet, Psikolojik destek

## Post-Earthquake Psychology and Social Life

### Abstract

In our country in the last 20 years since 1999, besides earthquakes, many natural disasters like floods, storms and drought happened and are going to be continuing in the next 20, 30, 50, 100, 1000 years. As long as the world exists, these events will be inevitable and if the authorities do not take action and people do not take precautions, these natural events will continue to turn into natural disasters. The purpose of this paper is, to think about the survivals of earthquakes, one of the greatest natural disasters, and to provide a method about how we can help or approach these people who needs psychological support and has special needs. In this context, it is tried to be determined which way to follow in psychosocial studies and to apply which model after the earthquake. Our study is based on the treatments and explanations of 17 patients diagnosed with post-traumatic stress disorder in Düzce following the earthquakes that took place on 17 August - 12 November 1999 and 8 patients who migrated to İzmir after the earthquakes. Based on these people, studies have been made and it is still being worked on how to follow psychosocial way after the earthquake. It is thought that the effects of possible earthquake catastrophe can be minimized more quickly by the teams which can be formed by people in charge, doctors and academicians. As a result, perhaps our perspective on earthquakes will change after today and even a more feasible method will be created with what can be done before and after the disaster.

**Keywords:** Earthquake, Natural event, Disaster, Psychological support

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Gönderim Tarihi / Submission Date: 10.04.2019  
Kabul Tarihi / Acceptation Date: 18.12.2019

## 1. INTRODUCTION

The age of our world is expressed as billions of years. This world may not have an extraordinary equilibrium with living and non-living things and especially with people. The world is still trying to create its own balance as in space (Ramsey and Burckley, 1965; Smith, 1984; Rodriguez et al., 2009). As long as this continues, natural disasters have always been and will be. The Centre for Research on the Epidemiology of Disasters analyzed graphically the geographical distribution of natural crises/disasters at the world level from 1976 to 2005 (Figure 1). More than 120 natural crises/disasters were noted in such countries as Russia, China, India, Iran, Australia and the United States.

Losses from disasters can take many forms on a construction project, including financial losses, physical destruction, and delays in the schedule (Cooper and Chapman 1987). When addressing disasters, it is important to anticipate failure modes and to then take steps to prevent those failure modes from developing catastrophic events (Petroski 1994). Catastrophic events are associated with high risk occurrences, but low risk occurrences with lesser impacts are also a concern. Low risk events tend to be handled by “redundancy” and “duplication” (Sagan 1993).

Unfortunately, the disaster has also other meanings than the meaning of physical movement (Stacey, 1977). Disaster is a natural phenomenon and the damage can be devastating and even apocalyptic but this catastrophe is not only because of the power of nature. Human factor has a great effect (Deprem Semineri, 2000; Deprem Şurası Raporu, 2004). Particularly in 1991-2005, the proportional distribution of major disasters in the world and the mortality rates for the types of disasters occurring are shown in Table 1 (ISDR Raporu, 2010).

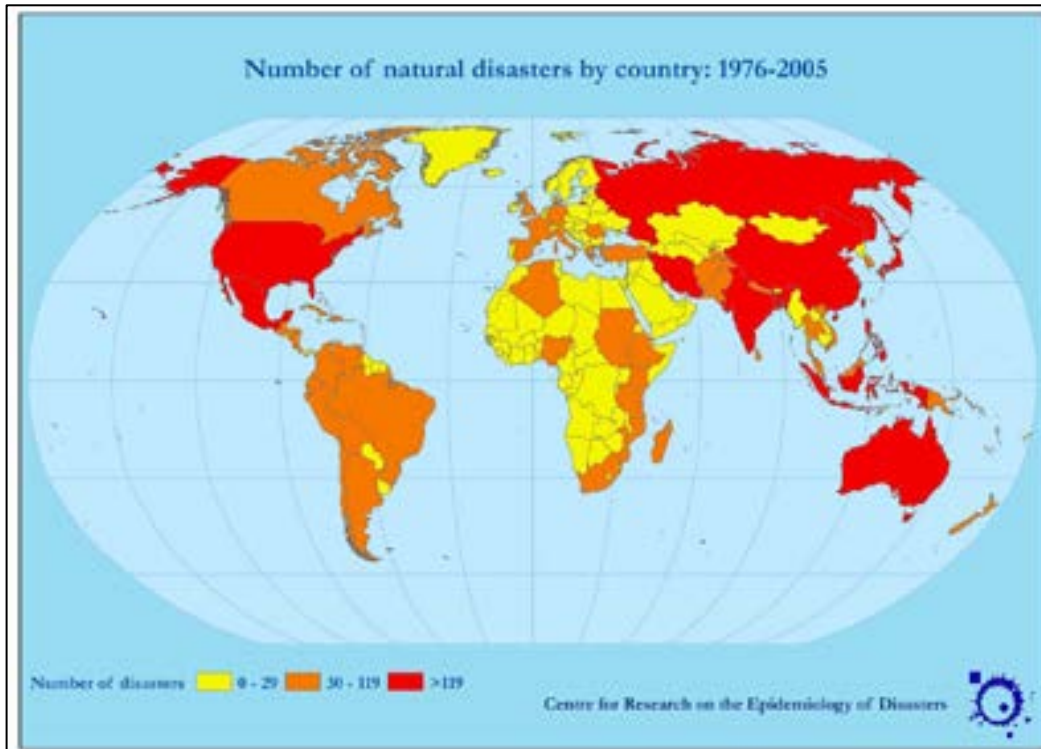


Figure 1. Number of natural disasters by country: 1976-2005 (EM-DAT Emergency Disasters Data Base, Yellow: 0-29, Orange: 30-119, Red: More than 119)

Table 1. Between the years of 1991-2005 the incidence of major disasters in the world and mortality rates

| Type of Disaster | Incidence (%) | Mortality (%) |
|------------------|---------------|---------------|
| Flood            | 53            | 8,5           |
| Drought          | 27            | 23,5          |
| Storm & Typhoon  | 16            | 26,8          |
| Earthquake       | 4             | 35,9          |

People particularly settle in unsuitable places and create disaster which aggravate the consequences as seen in earthquakes. The main subject of this study is the life after the earthquake, if you are still alive. It's not even easy to be a survivor because there are a lot of people who are physically injured in the earthquake and who lose their relatives and friends.

From the first minutes after the earthquake, these survivors are people with special needs, even if they are not disabled, and they will live the rest of their lives in a different way. At this point, the most sensitive subject is psychology (İlhan,.2017).

It is not easy to understand a person who feels psychological problems immediately by others. The earthquake destroyed not only their homes but also their lives. However, in spite of everything, it is necessary to hold on to life and to strengthen in every sense. Most of the time, instead of trying to overcome this psychology on their own, getting professional support will help the survivor to return to social life.

We cannot fully get prepared for the earthquakes, which we have experienced and that will continue to be in our country, so we should plan what we can do against the psychological traumas that may occur in every individual who has experienced this disaster after the earthquake (Figure 2).

Psychological traumas that occur after disasters affect the lives of individuals negatively and may disrupt the mental health of individuals in a process that can continue for life. So much so that when psychological support is not provided, mental disorders can be seen in many different ways and this process can affect the individuals around them. All events that occur after disaster and that require urgent psychological support can be called crisis. Crisis management includes work with individuals on disasters requiring emergencies (Cornell and Sheras, 1998). The crisis environment brings with it psychological traumas. However, the impact of the traumas that occur in a crisis environment does not affect psychologically the same level of each individual. These post-traumatic reactive behaviors are not permanent. However, psychological trauma after trauma affects the quality of life for a long time. After the disaster, physical environment events, injuries, deaths and financial losses affect the mental health of individuals and families negatively. In addition, the traumatic events that occur after the disaster situation cause a psychological and economic impact on a large part of the country following the announcement of the media to the whole country (Bullock and Coppola, 2016).

According to the statistics, averagely there is an occurrence of a devastating earthquake (unfortunately Mw:5 and above earthquakes considered as devastating in our country) in every 1.1 years in Turkey (Soysal and Sipahioğlu, 1981; Ambraseys and Finkel, 2006). Apart from the people in the crisis center, the Marmara earthquake in 1999 affected

many people nationwide in terms of economic harm, human losses and unemployment. It has also

indirectly affected foreign countries with commercial relations in a similar manner. Disaster management process is seen as a separate area of expertise in this context and it

is thought that it is a field that needs to be studied more today (Işık et al., 2012). The impact of a disaster on a large community has enabled it to reach very large audiences very quickly with the development of technology and accelerated communication. It is thought that children are the most affected group in this mass (Adviser and Okay, 2017).

Traumatic events that suddenly and unexpectedly break the daily life cycle have a devastating impact on both children and adults (Aksöz, 2014). As a result of the traumatic event itself and the effects it creates, the instinct of being safe, one of our basic psychological needs, can no longer fulfilled. The fact, that there are many deaths due to the event and that the disaster is created by human mind and efforts may increase the intensity and incidence of traumatic reactions. (Freud, 1922; Bugay and Karairmak, 2014; Doğan and Erdur, 2014).

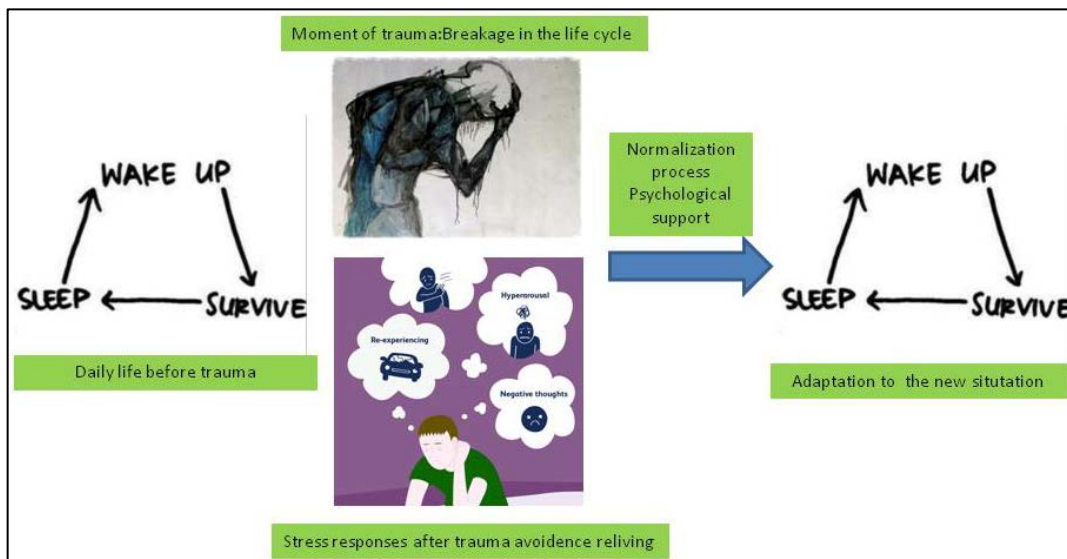


Figure 2. Traumatic event cycle from pre-event to new state (İlhan, 2017)

The fact that the traumatic catastrophe has a high likelihood of recurrence and that no measures have been taken to mitigate the effects of a possible catastrophe may increase public anger. After the earthquake, to seeing that the things that should had been done were not done on time, the feelings of retribution or despair of the furious survivors who lost their relatives and/or friends increases the complexity of the trauma and grief reactions.

Although post-traumatic stress reactions are similar; individual differences and developmental periods should be considered when working with groups that were exposed to trauma. Particularly when working with children whose mental development and thinking is different from adults and who have difficulty in making sense of the traumatic event and the mourning process special care should be taken (Kapıkıran, 2014).

## 2. MATERIAL AND METHODS

17 patients (10 women and 7 men in the 20-52 age range) who applied to the psychiatry outpatient clinic of the medical faculty in Düzce, which had two severe earthquakes on August 17, 1999 and November 12, 1999, and 8 patients (3 girls and 5 boys aged 11-18) who applied to the Psychiatry Department of Dokuz Eylül University Faculty of Medicine voluntarily participated in this study. In order to obtain information about living conditions

before and after the earthquake and the damages caused by the earthquake, information forms were prepared and applied to the patients. The findings were obtained completely by questionnaires conducted by doctors and 1 hour psychiatric sessions 3 days a week.

## 2.1 The Normalization of Life After Earthquake and Psychosocial Support Process

In the most general sense, trauma can be described as an immediate and threatening experience that directly threatens the existence of the individual (Türksoy, 2003). startle, increase in gastric secretions, clumsiness causes the emergence of physical stress responses (APA, 1994). The effects of such events do not disappear with the end of the events. These events, which have some negative effects on individuals of all ages and developmental periods, have significant effects especially on children.

In cases of disasters verbal skills may be insufficient and it is important to prepare an environment where children are not forced to express themselves, and can spend time with the adults they trust (Figure 3).



Figure 3. Nursery tent established after the Gölcük earthquake in 1999

Children who lost their relatives after the earthquake;

- Act as if nothing happened,
- Can show regressive behavior,
- Can experience outbursts of anger and behavioral problems.

To help children and adults who have lost their relatives these should be taken in to consideration:

- Sharing their feelings and thoughts is the most important part of the mourning process.
- Mourning is a difficult life task.
- Child wants to ask and talk about death.
- There is no need to lie to the child about death.
- Children would not be showing the same reaction even if they are in the same age group.
- Mourning process takes time.



### 3. RESULTS

When the results obtained from the doctor's reports and information forms are examined in general, the earthquake that creates insecurity environment will increase the feelings of inadequacy, lack of self-confidence and helplessness already present in individuals with avoidant and dependent personality disorders. The perception of life threats will be

exacerbated as they cannot make enough attempts to get social support and it will be difficult or impossible for them to receive support from the people or institutions they are connected to. They will accept the event because they will not have the belief that they will survive and deal with the stressful situation that trauma faces. They will behave away from

planned problem-based methods such as moving away from the environment, seeking social support, carrying negative thoughts, trying to suppress the event.

### 4. POST-TRAUMATIC SOCIALIZATION MODEL PROPOSAL AND POSSIBLE OUTCOMES

What can be done before the earthquake is always more than what can be done after the earthquake. Volunteers specialised in certain branches may establish a model for the survivors who are not disabled but need support before an earthquake.

In this model;

- ✓ Three-person volunteer teams can be formed ( *Earthquake Expert (Academician) – Civil Defense-Search and Rescue Expert – Psychosocial Support Specialist (Psychologist)*).
- ✓ It should be ensured that academicians who are earthquake experts strengthen their professional identity in the disaster area and get use to the field work. The psychologist in this team must have already worked with the trauma and found in the disaster area. These teams can make presentations at least once a year in all public and private institutions..
- ✓ A platform should be established in national congresses, where a summary of psychosocial studies and experiences of volunteer psychological counselors are shared.
- ✓ Including a compulsory course in the undergraduate programs which contains the topics as psychosocial support after disaster, crisis intervention, psychological first aid, trauma and stress reactions will increase the knowledge and professional self-confidence of the professional staff and make voluntary field studies easier.
- ✓ The fact that a part of the thesis studies carried out in the graduate programs is focused on trauma and disaster will increase the scientific findings in this subject.
- ✓ The academicians who will publish the written and visual materials of their applied studies in the field of trauma and disaster will make a significant contribution. There is a big gap in Turkish literature about this subject. It is an important task for academicians to evaluate field and academic studies together and to create a handbook for fieldman as a result of these evaluations.
- ✓ In each city providing a continuous educational support containing titles such as trauma and stress response, psychological first aid, compassion fatigue and psychosocial intervention for a group of 30 people, mainly from university hospitals and also from public and private health institutions, will create a team ready for responding immediately in case of a disaster

## 5. DISCUSSIONS

The description Charles Darwin made after the Concepcion Earthquake which almost wiped out Chilean city from the maps on February 20, 1835, "The earthquake, however, must be to every one a most impressive event: the earth, considered from our earliest childhood as the type of solidity, has oscillated like a thin crust beneath our feet; and in seeing the laboured works of man in a moment overthrown, we feel the insignificance of his boasted power" reflects the fact that the actual damage of the earthquake is in the brains and we must try to find a solution for this problem.

## ACKNOWLEDGEMENT

I am grateful to Dr. İdil Akçalı for her English editing.

## REFERENCES

- Ambraseys, N. N. and Finkel, C. F. (2006). *Türkiye'de ve Komşu Bölgelerde Sismik Etkinlikler: Bir tarihsel inceleme 1500-1800*. TÜBİTAK Yayınları Akademik Dizi, 86-87.
- Amerikan Psikiyatri Birliği (APA) (1994). *Mental Bozuklukların Tanısal ve Sayımsal El kitabı*, Dördüncü Baskı (DSM-IV), Amerikan Psikiyatri Birliği, Washington DC: Çev. Köroğlu E., Hekimler Yayın Birliği, Ankara.
- Bugay, A., and Kararımak, Ö. (2014). *Sağlıklı Psikolojik İşlerlik ve Travma karşısında Uyum Sağlama Yetisi Olarak Psikolojik Sağlamlık*. Türkan Doğan ve Özgür Erdur (Ed.), Afetler, Krizler, Travmalar ve Psikolojik Yardım içinde (75-113). Türk PDR Derneği Yayınları, Ankara.
- Bullock, J. A., Haddow, G. and Coppola, D. P. (2016). *Managing Children in Disasters: Planning For Their Unique Needs*. CRC Press.
- Cooper, D.F. and Chapman, C.B. (1987). *Risk Analysis for large projects-Models, methods and cases*. NY: John Wiley and Sons.
- Cornell, D. G. ve Sheras, P. L. (1998). *Common Errors in School Crisis Response: Learning From Our Mistakes*. Psychology in The Schools, 35(3), 297-307.
- Deprem Semineri. (2000). 6 Kasım 1999, TMMOB, İstanbul İl Koordinasyon Kurulu, İstanbul, 149.
- Deprem Şurası Raporu. (2004). Bayındırlık ve İskan Bakanlığı, Afet İşleri Genel Müdürlüğü, Komisyon Raporları, Temmuz, Ankara.
- Doğan, T. and Erdur, Ö. (2014). *Afetler, Travmalar, Krizler ve Travmatik Stres Tepkileri*. Türkan Doğan ve Özgür Erdur (Ed.), Afetler, Krizler, Travmalar ve Psikolojik Yardım içinde(3-24). Türk PDR Derneği Yayınları, Ankara.
- EM-DAT Emergency Disasters Data Base. <http://www.cred.be>
- Freud, S. (1922). *Mourning and Melancholia*. The Journal of Nervous and Mental Disease, 56(5), 543-545.
- Isdr Raporu. (2010). Disaster statistic:1991-2005,<http://www.unisdr.org/disaster-statistics/top50.htm>).

Işık, Ö., Aydınlioğlu, H. M., Koç, S., Gündoğdu, O., Korkmaz, G. and Ay, A. (2012). *Afet Yönetimi ve Afet Odaklı Sağlık Hizmetleri*. Okmeydanı Tıp Dergisi, 28(2), 82-123.

İlhan, T. (2017). *A Model Suggestion For Trauma and Psychological Process Living People After Earthquake*. International Science and Technology Conference (ISTEC-2017 Harvard University-Cambridge, USA). Proceedindgs Book, 659-665.

Kapıkıran, Ş. (2014). *Geçmişte Olumsuz Yaşantısı Olan ve Olmayanların Öfke Stres Kaygı ve Depresyon Değişkenleri Bakımından Fark Olup Olmadığının İncelenmesi*. V. Ulusal

Psikolojik Danışma ve Rehberlik Uygulama Kongresi. Türk Psikolojik Danışma ve Rehberlik Derneği (PDR).

Petroski, H. (1994). *Design Paradigms, Case Histories of Error and Judgment in Engineering*, Cambridge, UK: Cambridge University Press.

Ramsey, W. L. and Burckley, R. A. (1965). *Modern Earth Science*, Holt, Rinehart and Winston Inc., 17331-0715, 664.

Rodriguez, J., Vos, F., Below, R. and Guha-Sapir, D. (2009). *Annual Disaster Statistical Review; 2008, The numbers and trends, Centre for Research on the Epidemiology of Disaster (CRED)*, Jacoffset Printers, Melin (Belgium), 25.

Sagan, S.D. (1993). *The Limits of Safety: Organizations, Accidents and Nuclear Weapons*. Princeton, N.J: Princeton University Press.

Smith, D.G. (1984). *Cambridge Encyclopedia of Earth Science*, Cambridge University Press, 496.

Soysal, H. and Sipahioğlu, S. (1981). *Türkiye ve Çevresinin Tarihsel Deprem Kataloğu (M.Ö.2100 - M.S 1900)*. TÜBİTAK. 31.

Stacey, F. D. (1977). *Physics of the Earth*, John Wiley and Sons, New York, 414.

Türksoy, N. (2003). *Psikolojik travma ve tanım sorunları. Psikolojik Travma ve Sonuçları*(Ed. Aker, T., Önder, M. E.). 5 US Yayınları: İstanbul.