



HALKBİLİM  
FOLKLORE

EDEBİYAT  
LITERATURE

ANTROPOLOJİ  
ANTHROPOLOGY

Uluslararası Hakemli Dergi Yılda Dört Sayı Çıkar

*A Peer Reviewed Quarterly International Journal*

# *folklor/edebiyat*

*folklore/literature*

*Deprem Özel Sayısı*  
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# folklor/edebiyat

## folklore&literature

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# folklor/edebiyat

Üç Aylık Bilim ve Kültür Araştırmaları Dergisi

## Amaç ve Kapsam - Tarihçe:

1994 yılından beri Ankara'da çıkan *folklor/edebiyat* (İngilizce adı *folklor/literature*) dergisi, 2008 yılı 58. sayıdan itibaren Uluslararası Kıbrıs Üniversitesi bünyesinde, uluslararası hakemli sistemle, basılı ve elektronik nüshalarla yılda dört sayı olarak yayımlanmaktadır. *folklor/edebiyat*, akademik alanda hazırlanan çalışmaların yer aldığı bir yayım olarak bilimsel araştırma yapan kurum ve kişilere katkı sağlamak amacıyla toplumsal hizmet sunan sosyal bir organdır. Dergide; folklor, edebiyat, antropoloji ve bu alanlarla bağlantılı dallardaki bilimsel, özgün ve nitelikli oldukları çift kör hakem sistemiyle onaylanmış araştırma makaleleri, bilimsel derlemeler ile kitap tanıtım ve eleştirileri değerlendirilmektedir.

*folklor/edebiyat* dergisi, Uluslararası Kıbrıs Üniversitesi tarafından yayınlanan açık erişimli çift kör hakemli bir araştırma dergisidir. Dergi, yüksek kaliteli teorik ve ampirik orijinal araştırma makalelerini ve analizlerini, dokümanları ve yorumları, uygulamaları veya uygulama tabanlı çalışmaları, eğitim çalışmalarını, meta analizlerini, eleştirilerini, değerlendirmelerini ve kitap incelemelerini kabul eder.

Dergiyi yayımlanmak üzere teslim edilen metinler Türkçe veya İngilizce yazılmış özgün bilimsel çalışmalar olmalıdır. Dergiyi gönderilen makaleler amaç, kapsam ve yeterlilik kriterleri bakımından Ödenetim Kurulu, editör tarafından değerlendirilerek uygun bulunanlar -gerekli durumlarda- alan editörlerine yönlendirilmektedir. Kör hakemlik uygulanarak en az iki uzman hakem görüşü ile makale inceleme aşaması tamamlanmaktadır. Dergiyi gönderilen makalelerin içerikleri özgün, daha önce herhangi bir yerde yayımlanmamış veya yayımlanmak üzere gönderilmemiş olmalıdır. Makaleler, araştırma ve derleme başlıkları altında yayımlanır.

Araştırma Makalesi: Orijinal bir araştırma bulgu ve sonuçlarıyla yansıtan yazılardır. Çalışmanın özgün ve ulusal bilime katkısı olmalıdır.

Derleme Makalesi: Yeterli sayıda bilimsel makaleyi tarayıp, konuyu bugünkü bilgi ve teknoloji düzeyinde özetleyen, değerlendirme yapan ve bulguları karşılaştırarak yorumlayan yazılardır.

"Açık erişim ilkesiyle, herhangi bir kullanıcının bu makalelerin tam metinlerini okumasına, indirmesine, kopyalmasına, dağıtmasına, yazdırmasına, aramasına veya bunlara bağlantı vermesine, indeksleme için taramasına izin veren, halka açık internete ücretsiz kullanılabilirliğini kastediyoruz. Çoğaltma ve dağıtım üzerindeki tek kısıtlama ve bu alandaki telif hakkının tek rolü, yazarlara çalışmalarının bütünlüğü üzerinde kontrol hakkı vermek ve uygun şekilde onaylanma ve alıntı yapma hakkı olmalıdır." (Budapeşte Açık Erişim Girişimi)

Dergi, CORE ve COPE ilkelerini kabul eder.

*folklor/edebiyat* dergisi basılı ve çevrimiçi olarak Şubat, Mayıs, Ağustos, Kasım aylarında yılda dört sayı yayımlanmaktadır. Derginin kısaltılmış adı folk/ed' dir.

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## Yayım Süreci:

Dergiyi gönderilen makaleler, UKÜ bünyesindeki Ön Denetim Kurulu'nca dergi ilkeleri, etik kuralları ve teknik kurallarına uygunlukları açısından denetlenir. Bu kurulun yetkisi dışındaki gerekli teknik ekleme /düzeltilmeler için yazarlarla işbirliği yapılır. *folklor/edebiyat* dergisi yönetimi (Ön Denetim Kurulu-Danışma Kurulu ve editör) intihal (plagiarizm) konusunda Turnitin/ iThenticate(R) aracılığıyla ve diğer bilimsel denetimlerden sonra metin incelemelerine geçer. Makalelerin özgün ve akademik ilkelere uygun olması, temel yayın koşullarıdır. DOI kayıtları ile yayınlanacak makalelerin bilimsel, etik ve yasal sorumlulukları yazarlarına aittir. Dergiyi iletilen makaleler, Ödenetim Kurulu incelemesinden sonra, Alan Editörü ve Editör'ün onayıyla alanda uzman hakemlere gönderilir. Değerlendirme sürecinde, "çift kör hakem" işleyişi uygulanır. İki olumlu hakem raporu şarttır. Yazarlar, denetim süreçlerindeki uyarıları yerine getirirler; katılmadıkları hususlar varsa, gerekçeleriyle birlikte karşı görüşlerini iletirler. Bilimsel makaleler 10000; inceleme/tartışma/eleştiri yazıları 4000, medya, kitap tanıtım ve eleştiri yazıları 1500 sözcüğü aşmamalıdır. Dergide yazısı yayınlanan yazarlara, bir adet dergi ve makalelerinin pdf dosyası gönderilir. Dergiyi gönderilen yazılar, hiçbir durumda iade edilmez.

## Hakem Değerlendirme Süreci:

Dergiyi gönderilen tüm çalışmalar aşağıda belirtilen aşamalara göre körleme yoluyla değerlendirilmektedir.

### Körleme Hakemlik Türü:

Dergi, tüm çalışmaların değerlendirme sürecinde çifte körleme yöntemini kullanmaktadır. Çift körleme yönteminde çalışmaların yazar ve hakem kimlikleri gizlenmektedir.

### İlk Değerlendirme Süreci:

*folklor/edebiyat* dergisine gönderilen çalışmalar ilk olarak Ödenetim Kurulu tarafından değerlendirilir. Bu aşamada, derginin amaç ve kapsamına uymayan, Türkçe ve İngilizce olarak dil ve anlatım kuralları açısından zayıf, bilimsel açıdan kritik hatalar içeren, özgün değeri olmayan ve yayın politikalarını karşılamayan çalışmalar reddedilir. Uygun bulunan çalışmalar ise ön değerlendirme için ilgili alan editörüne gönderilir.

### **Ön Değerlendirme Süreci:**

Ön değerlendirme sürecinde alan editörleri çalışmaların, giriş ve alan yazın, yöntem, bulgular, sonuç, değerlendirme ve tartışma bölümlerini dergi yayın politikaları ve kapsamı ile özgünlük açısından ayrıntılı bir şekilde inceler. Bu inceleme sonucunda uygun bulunmayan çalışmalar alan editörü değerlendirme raporu ile iade edilir. Uygun bulunan çalışmalar ise APC ücretinin ödenmesinden sonra hakemlendirme sürecine alınır.

### **Hakemlendirme Süreci:**

Çalışmalar içeriğine ve hakemlerin uzmanlık alanlarına göre hakemlendirilir. Çalışmayı inceleyen alan editörü, *folklor/edebiyat* dergisi (veya Dergipark) hakem havuzundan uzmanlık alanlarına göre en az üç hakem önerisinde bulunur veya çalışmanın alanına uygun yeni hakem önerebilir. Alan editöründen gelen hakem önerileri editörler tarafından değerlendirilir ve çalışmalar editör(ler) tarafından hakemlere iletilir. Hakemler değerlendirdikleri çalışmalar hakkındaki hiçbir süreci ve belgeyi paylaşmayacakları hakkında garanti vermek zorundadır.

### **Yazım Kuralları:**

Yazılar, "Microsoft Word Document" formatında, metin ve sonuç kısımları "Times New Roman" yazı tipi ve "12 punto" büyüklüğünde olmalıdır. Yazılar 2 satır aralığı, kenar boşlukları her bir kenardan 2,5 cm. boşluk olacak şekilde ayarlanmalıdır. Satır sonlarında sözcükler kesinlikle hecelerine bölünmemelidir. Metin blok (sağa sola dayalı), satırbaşı verilmeden ve paragraflar arasında satır boşluğu bırakmadan, otomatik olarak, altı nokta boşluk bırakılarak hazırlanmalıdır.

İlk sayfa düzeni:

- 1- Makale başlığı (ortada 12 sözcüğü geçmeyecek; ortalanacak)
- 2- Yazar adı (sağ köşe, sağa dayalı)
- 3- Çeviri makaleler için çevirmen adı (sağa dayalı)
- 4- Türkçe özgün makaleler için 150-200 sözcük arasında Türkçe makalelerdeki başlığın altına İngilizce çevirisi, Türkçe ve İngilizce 150-200 sözcükten oluşan Öz /abstract yerleştirilir. İngilizce makalelerde 250 sözcükten oluşan Türkçe Öz verilir. Türkçe makalelerde 750-1000 sözcükten oluşan genişletilmiş özet "extended summary" gereklidir.
- 5- Öz ve abstractın altında Türkçe/İngilizce en az 3, en çok 5 sözcükten oluşan anahtar sözcükler yer alır.
- 6- Sayfa altında verilecek bilgiler:
  - Makale ile ilgili açıklama çeviri metinlerde kaynak metin ile ilgili açıklama (\*) işareti ile,
  - Yazarla ilgili bilgi sayfa altında (\*\*) işaretiyle
  - Çevirimenle ilgili açıklama (\*\*\*) işaretiyle gösterilir.

Dipnot ve Kaynaklar APA 7 standartlarına uygun olarak verilir, ikinci kaynaktan yapılan alıntılarda, asıl kaynak da belirtilir. Metin içinde kaynak gösterme ve diğer teknik uygulamalar hakkında ayrıntılı bilgi için aşağıdaki kaynaktan yararlanılabilir:

<http://www.apastyle.org>

**Yayın takvimi:** Dergi, özel sayılar hariç yılda Şubat, Mayıs, Ağustos ve Kasım aylarında olmak üzere dört sayı olarak yayımlanır.

Derginin yayım dili Türkçe ve İngilizce'dir.

Dergi, OASPA (Open Access Scholarly Publishing Association) üyesidir; CORE platformundadır.

### **Etik Kurul Zorunluluğu:**

TR DİZİN 2020 Etik Kriterleri kapsamında, dergimize gönderilecek olan yayınlar için Etik Kurul Belgesi zorunlu olacaktır. Bu kapsamda etik kurul izni gerektiren çalışmalar için makalenin ilk ya da son sayfasında ilgili Etik Kurul onayı ile ilgili bilgilere (kurul-tarih-sayı) yer verilmesi gerekecektir. Bu nedenle dergimize makale gönderimi yapacak olan aday yazarlarımızın ilgili kriteri göz önünde bulundurarak makalelerini düzenlemeleri gerekmektedir.

*folklor/edebiyat* dergisi etik durumlar, hatalar veya vazgeçmeler konusunda konuyla ilgili uluslararası alanda benimsenmiş ilkelere bağlıdır. Dergiye gönderilen bilimsel çalışmaların yayınlanmasından vazgeçilmesini önlemek editör kurulunun kritik sorumlulukları arasındadır. Bilimsel çalışmalarda gözlemlenebilecek etik dışı davranışların hiçbir örneği kabul edilemez. Dergiye gönderilmiş bilimsel araştırma içeriğinin özgün kaynaklardan yararlanılarak hazırlandığı yazarlar tarafından beyan edilmiştir.

*folklor/edebiyat* dergisi, "Dergi Editörleri Davranış İlkeleri"ni (Code of Conduct for Journal Editors-COPE) esas alarak yayım sorumluluklarını yerine getirmeyi temel ilke olarak benimsemiştir. Bu ilke doğrultusunda editör kurulu, hakemler ve yazarlar dergi başvuru ve değerlendirme süreçlerindeki işlemlere uygun davranmayı etik kurullar kapsamında uygulamakla zorunludur. folklor/edebiyat dergisi, başkalarına ait çalışmalarını kötüye kullanma, çıkar ilişkisi gibi etik ihlaller içeren hiçbir etik dışı çalışmanın kabul edilemez olduğunu ve yasal tüm haklarının saklı olduğunu bildirilir.

### **Etik Kurul İzni ve Tubitak Ulakbim Tr - Dizin Kuralları:**

2020 yılında TR Dizin tarafından açıklanan Etik İlkelerle ilgili kurallar kapsamında aşağıdaki ilkelere tüm yazarların dikkat etmesi önemlidir:

Etik Kurul izni gerektiren araştırmalar aşağıdaki gibidir:

- \* Anket, mülakat, odak grup çalışması, gözlem, deney, görüşme teknikleri kullanılarak katılımcılardan veri toplanmasını gerektiren nitel ya da nicel yaklaşımlarla yürütülen her türlü araştırmalar,
- \* İnsan ve hayvanların (materyal/veriler dâhil) deneysel ya da diğer bilimsel amaçlarla kullanılması,
- \* İnsanlar üzerinde yapılan klinik araştırmalar,
- \* Hayvanlar üzerinde yapılan araştırmalar,
- \* Kişisel verilerin korunması kanunu gereğince retrospektif çalışmalar. Ayrıca;

- \* Olgu sunumlarında “Aydınlatılmış onam formu”nun alındığının belirtilmesi,
- \* Başkalarına ait ölçek, anket, fotoğrafların kullanımı için sahiplerinden izin alınması ve belirtilmesi,
- \* Kullanılan fikir ve sanat eserleri için telif hakları düzenlemelerine uyulduğunun belirtilmesi.

Yukarıdaki koşullara uyan ve Etik Kurul izni gerektiren yazıların *folklor/edebiyat*’a gönderilmesi durumunda, alınmış olan resmi Etik Kurul izin belgelerinin de dergiye ek olarak gönderilmesi gerekmektedir.

#### **folklor/edebiyat Telif Hakkı:**

Dergimizde yayınlanmak üzere sisteme yüklenen çalışmalar için yaygın telif hakkı sözleşmesi istenmez. Dergide yer alan ürünler için yazarlardan sadece 100 avro Makale İşletim Ücreti alınır. Yazar ya da yazarlar, bu durumu kabul eder ve derginin yaygın ilkelerine uygun hareket etmeyi onaylar, bu sisteme dahil olurlar. Dergiye makale gönderme, Dergipark platformuyla ya da dergi sitesindeki Makale Takip Sistemi yoluyla gerçekleştirilir.

Bu dergi, içeriğin kamuya serbestçe ulaşılabilir kılınması ve daha geniş bir küresel bilgi alışverişini desteklemesi ilkesine dayanarak içeriğine anında açık erişim sağlar. Bu bağlamda, akademik yayıncılık etiği ihlalleri olmaksızın derginin web sitesinin kullanıcıları, makalelerinin tam metinlerini okuyabilir, indirebilir, kopyalayabilir, dağıtabilir, yazdırabilir, arayabilir ve ya bağlantı kurabilir ve okuyucuların bunları başka bir yasal amaç için kullanmasına izin verebilir. (Budapest Open Access Initiative’s definition of Open Access). Dergi makalelerinin mümkün olduğunca geniş kitlelere ulaşması gerektiğinden, bu yeni dergilerde yayımlanan materyale erişimi ve kullanımı sınırlamak için telif haklarına başvurulmayacaktır. (Kaynak: Budapest Open Access Initiative/ <https://www.budapestopenaccessinitiative.org/read>).

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Dergimizde yayınlanması amacıyla gönderilen ve diğer bölümlerde belirtilmiş olan koşullara uygun çalışmalarda saptanabilecek ilgili yasalara uygun olarak gerçekleştirilmemiş alıntı, intihal gibi konularda yazar ya da yazarlar tek taraflı olarak sorumludur. Her makalenin benzeme oran raporları, dergi yönetimince beş yıl süreli olarak arşivlenir.

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Dergimize <https://www.folkloredebiyat.org> ve <https://dergipark.org.tr/tr/pub/fe> adreslerinden tüm dünyadan ulaşmakta ve açık erişim politikamız gereğince bütün sayılarımızdan oluşan arşivimize ücretsiz erişim sağlanmaktadır.

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## folklor/edebiyat

Quarterly Scientific Cultural Journal

### Scope, aims and history:

The journal was founded by Metin Turan in 1994 and the first issue started to be published in Ankara.

Since 2008, the journal has been granted publishing rights by the International Cypriot University and is regularly published as an academic publication of the University in the same period and is being delivered to the scientific circles as free of charge. The Journal of *folklore/literature* is a publication of Cyprus International University which publishes original works from the fields of folklore, literature, anthropology, language, linguistics based on analysis and research conducted in accordance with the scientific methods. The scope of the journal includes a variety of different pieces that range from original theoretical works to original research and analyses; to documents and interpretations; to applications or application based works; to educational works, meta-analyses, critiques, evaluations, and book reviews.

The journal of *folklore & literature* is an open access double peer reviewed research journal that is published by Cyprus International University. The journal welcomes and acknowledges high quality theoretical and empirical original research papers and analysis, documents and interpretations, applications or application based works, educational works, meta-analyses, critiques, evaluations, and book reviews.

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*We would like to thank the valueable scientists for their precious time and contributions in evaluating the published and unpublished articles that were sent for this issue.*

***folklor/edebiyat***

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## Değerli folklor/edebiyat okurları merhaba,

Yaşadığımız coğrafyayı defalarca alt üst ederek milyonlarca insanı ölüm, yıkım, yas, yurtsuzlaşma ve yoksullaşma gibi travmalarla çevreleyen deprem üzerine düşünmek, konuşmak, araştırma ve inceleme yapmak ne kadar zor ise bir o kadar da kaçınılmazdır.

Elinizde bulunan bu Özel Sayı'nın yola çıkış öyküsü de bu kaçınılmaz acı gerçeklik ve deneyimden doğmuştur. Prof. Dr. Metin Karadağ'ın editörlüğü döneminde Dr. Erdoğan Gedik ve Prof. Dr. Hande Birkalan-Gedik hocalarımız yakın bir geçmişte; 6 Şubat 2023'te yaşadığımız deprem sonrasında bu sayıyı hazırlamaya karar verdiler. 6 Şubat'ı takip eden günlerde nefeslerimizi tutarak dinlediğimiz “ses var mı?”, “sesim geliyor mu?” nidalarının ardına düştüler. Deprem bölgelerinden, yerin altından gelecek sesleri gün ışığına çıkarmayı amaçladılar. “Ulusal ve uluslararası göçün, yurtsuzlaşmanın, ekonomik, sosyal ve kültürel yoksullaşmanın depremin ilk ortaya çıkan etkileri olduğunu vurguladılar. Bundan başka daha birçok sosyal, psikolojik, ekonomik etkilerin antropoloji, halkbilim, psikoloji, tarih ve edebiyat disiplinlerinin bakış açısıyla ele alınacağı bir özel sayı ile bu ulusal ve evrensel felâketin yarattığı olguları bilim dünyasına sunmayı planladık”larını duyurdular. Güçlü depremlere karşı insan davranışı tepkilerini ele alırken, afet araştırması alanındaki güncel konuları tartışmayı; sadece akademi için değil, politika yapımcılar için de bir itici güç yaratmayı umduklarını belirttiler.

Yazarlar tarafından sayıya gösterilen ilgi; bu tür afetlerin etkilerinin tartışılması, araştırma, uygulama, gözlem ve deneyimlerin paylaşımı ile yeni yaşam pratikleri üretmeyi destekleyici ortak güç kaynakları yaratılmasına duyulan ihtiyacı belirginleştirmektedir.

Bizim, Şubat 2023'te “İnsanın bir istatistik bile olamadığı korkunç zamanlar...” olarak tanımladığımız deprem felaketiyle yüzleşmemiz, voleybol turnuvasına katılmak için gittikleri Adıyaman'da 6 anne-baba, 5 öğretmen ve 12-14 yaşlarında 24 sporcu çocuğumuzu kaybetmemizle oldu. Bu nedenle, adamızdaki savaş travmasından sonra toplumsal boyutta yaşanan bu yaşla, Şampiyon Melekler olarak adlandırdığımız ve ölümü yakıştıramadığımız için Şampiyon Meleklerimizi Yaşatma Derneği vd. ile yaşatmakta karar kıldığımız çocuklarımız ve yaşlı ailelerine de ithaftır bu sayı. Depremde hayatını kaybedenlerle birlikte kurtularak yaşamını sürdüren tüm insanlara da adanmıştır.

Karanlık Şubat'ta en çok enkaz altında kalan evlatlarımızdan ses gelmesini beledik. Onların cansız bedenleriyle adaya dönen annelerimiz; “Bizde evler kapandı, odalar kapandı, karanlığa gömüldük. Kokusu gitmesin diye sıkı sıkı kapattık, içimi-

ze çektik her nefesimizde.” , “ Hafif acılar konuşabilir ama derin acılar dilsizdir”, “anne yüreğimiz hükümsüzdür” sözleriyle hafızamıza kazındılar.

Onların acısını hatırlamak, kültürel belleğimizde özel bir yer açmak arzusuyla Üniversitemiz Fen-Edebiyat Fakültesi Dekan Yardımcısı Yrd. Doç. Dr. Bengü Berkmen’in Şampiyon Meleklerimiz için kaleme aldığı anma yazısını Türkçe yayınlıyoruz.

Deprem Özel Sayısı'nın editörleri Dr. Erdoğan Gedik ve Prof. Dr. Hande Birkalan-Gedik hocalarım, bu felaket gibi çok ağır ve meşakkatli bir süreçte insanüstü bir emek sarf ettiler. Makalelerin yayın sürecinde gösterdikleri bilimsel hassasiyet ve uzun mesailer için kendilerine minnettarız. Hande Hocama ve Erdoğan Hocama eşlik ettiğim günler ve gecelerde, özellikle depremzede yazarlarımız Aylin Eraslan, Fulya Doğruer, Dilar Diken Yücel, Ömer Faruk Yücel ve Murat Gökhan Dalyan ile iletişim kurduğumuz son dönemlerde bu özel sayının amacına ulaştığını hissettim. Elbette ki elimizdeki imkânlar ve şartlar dâhilinde bu sonuçları çıkardık. Hocalarımız bilimsel yükümlülük, etik duyarlılık gösterdiler, yılların deneyimi ile her aşamada sayıda ismi geçen herkese okul oldular. Kendilerine teşekkürü özel sayımıza yazı göndermiş bulunan öğrencilerinin yanında “zaman” da “hatırlama”nın kaçınılmaz varoluşu gibi sunacaktır. Kendilerine derin saygılarımla.

## **Dear *Folklore/Literature* readers,**

It is difficult to think, talk, discuss, and study the earthquakes that have repeatedly turned our geography upside down and resulted in serious traumas for millions of people on issues such as death, destruction, mourning, dispossession, and impoverishment. However, evaluating such disasters from academic and historical perspectives is also crucial and inevitable.

The starting point of this Special Issue has emerged from the abovementioned inevitable bitter reality and experience. Under the editorship of Prof. Dr. Metin Karadağ, Dr. Erdoğan Gedik and Prof. Dr. Hande Birkalan-Gedik decided to prepare this issue after the earthquake we experienced on 6 February 2023. In the days following 6 February 2023 they were in pursuit of the cries “Is there a sound?” and “Is there anyone who can hear my voice?” to which we listened with bated breath. They aimed to make the voices from earthquake zones and underground heard from all over the world. They emphasized that “the first effects of the earthquake were national and international migration, homelessness, and economic, social and cultural impoverishment. Moreover, they announced that they planned to present to the world of science the phenomena created by this national and universal catastrophe with a special issue in which many other social, psychological, and economic effects of this earthquake would be discussed from the perspectives of anthropology, folklore, psychology, history, and literature”. They stated that they hoped to discuss current issues in the field of disaster research and create an impetus not only for academia but also for policymakers while addressing human behavioral responses to strong earthquakes.

The authors’ interests in the issue illustrate the need to discuss the effects of such disasters and to create common power resources supporting the production of new life practices through sharing research, practice, observations, and experiences.

Our confrontation with the earthquake disaster in February 2023, which we define as “terrible times when a person cannot even be included in a statistic...”, was the time when we lost 6 parents, 5 teachers, and 24 athlete children aged 12-14 in Adıyaman, where they had gone to participate in a volleyball tournament. This is a deep mourning that we experienced on the societal level after the war trauma on our island. For this reason, this issue is also dedicated to our children and their bereaved families, whom we call Champion Angels and for whom we have decided to keep their memories alive with our Association for Keeping Our Champion Angels Alive et al. because we cannot accept the reality of their death. It is also dedicated to all the people who lost their lives in the earthquake, as well as all the people who survived.



In the dark February, we waited the most for the voices of our children trapped under the rubble. Our mothers returned to the island with the lifeless bodies of their children, and they remarked: “We closed the doors of our houses, the doors of our rooms, and we were buried in darkness. We closed them tightly so that the smell of our children would not go away, and we inhaled it with every breath.” “Light pains may say something, but deep pains are mute”, and “as mothers, our hearts are null and void”. All those remarks were engraved in our memories.

With the desire to remember their pain and allocate a special place for this heartbreaking reality in our cultural memory, we are also publishing the Turkish article written by Asst. Prof. Dr. Bengü Berkmen, the Vice Dean of the Faculty of Arts and Sciences of our University, in the memory of our Champion Angels.

Dr. Erdoğan Gedik and Prof. Dr. Hande Birkalan-Gedik, the editors of the Earthquake Special Issue, made extraordinary efforts in a very challenging and arduous process as we have seen in this disaster. We are grateful to them for their scientific sensitivity and long hours of work during the publication process of the articles. During the days and nights when I accompanied our special issue editors and especially during the last periods when we communicated with our earthquake survivor authors Aylin Eraslan, Fulya Doğruer, Dilar Diken Yücel, Ömer Faruk Yücel and Murat Dalyan Gökhan, I felt that this special issue had achieved its purpose. Of course, we have obtained these results with our existing means and opportunities. Our professors have acted according to scientific obligation and ethical sensitivity, and, they have been a school for everyone contributing to this issue with their experience at every stage. In addition to their students who have sent articles to our special issue, “time” will thank them for the inevitable existence of “remembering”. I convey my deepest respect to them.

Assoc. Prof. Dr. Mihrican Aylanç  
Editor

## Ruins and Remembrance: Interdisciplinary Perspectives on Earthquakes

**Erdoğan Gedik:** ORCID ID: 0009-0008-2356-7698

**Hande Birkalan-Gedik:** ORCID ID: 0000-0003-2854-3130

27 December 1939, Erzincan

20 December 1942, Erbaa – Tokat

31 May 1946, Varto – Muş

7 March and 19 August, 1966 Varto – Muş

17 August 1999, Gölcük

23 October 2011, Van

6 February 2023 Kahramanmaraş – Hatay – Adıyaman...

Songs, poems, and laments...

Flashing shutters, conducted interviews, breaking news...

People are watching the rescue footage, holding their breaths... They are hoping that good news will come—that perhaps a beating heart, a breathing soul will be rescued from the rubble soon.

Amidst the chaos, a lone teddy bear appears in the picture...

But more often, though, and sadly, it is the haunting images of children without mothers and fathers, or parents left to grieve the absence of their children...

This is the picture after an earthquake in Türkiye, unfortunately.

Each time we remember the earthquakes in Türkiye, our collective memory sways like a pendulum, caught between hope and loss, ever shifting, never fully settling.

We often wondered if there is an end to this story, an end to the sorrow we feel.

How can you explain to someone who has never experienced an earthquake that a child might be named *Deprem*? Or, put differently, who would name their child “earthquake”? What could signify the memory of an earthquake more profoundly than a name carried through a lifetime?

During his field research, Erdoğan Gedik had witnessed something during a funeral he attended in İzmit, which was both surprising and saddening at the same time. On 15

February 2005, in the cemetery in front of the Cemevi in the Tavşantepe neighbourhood of İzmit, where several people from Varto lived, he saw about twenty graves of people from Varto. The date of death for all of these individuals was noted as 17 August 1999. When he asked, the crowd explained that these graves belonged to the people who had migrated from Varto after the 1966 earthquake. The survivors of the 1966 Varto earthquake had, 33 years later, fallen victim to the Marmara earthquake. After the Marmara earthquake a small group of people started returning to Varto, because the earthquake survivors had lost everything once again. Like 33 years ago, they had to start their lives over from scratch.

Erdoğan Gedik heard about a similar story after the 6 February 2023 earthquake. After the Great Erzincan Earthquake that took place on 27 December 1939, the Turkish state resettled the earthquake survivors from Erzincan in some villages of Varto. Unfortunately, these survivors were caught in the earthquakes in Varto in 1946 and 1966. After the 1966 earthquake, survivors of the Varto earthquake were settled in warmer regions such as Malatya, Adana and İskenderun. These families, who had been fleeing earthquakes since 1939, tragically found themselves once again caught in another earthquake on 6 February 2023.

It seems that the earthquake stories and their sorrows are repeating pulses in history. Therefore, the motivation for this special issue stems from a collective need to understand and reflect upon the long-lasting impact of these devastating events on individuals and communities.

However, the motivation for this issue is not just to recount the tragedies, but to explore the human condition in the aftermath of destruction. We wanted to bring light to some questions: How do communities rebuild their lives after such devastating loss? How do past earthquakes influence contemporary disaster management and migration? How can our collective memory of these events inform future resilience strategies? These and many others are the questions that we seek to address in this special issue, contributing to a deeper understanding of the complex impacts of natural disasters on people.

Our special issue begins with an article by Erdoğan Gedik, titled *The Impact of the 1966 Earthquakes on Migration and Social Change: A Case Study of Varto (Türkiye)*, which delves into the profound social transformations triggered by the 1966 Varto earthquakes, connecting migration and cultural change across internal and transnational contexts. Based on fieldwork and personal narratives, he highlights the intricate interplay of trauma, resilience, and adaptation among affected communities. The study offers a nuanced understanding of how seismic events can reshape identities, social structures, and cultural practices over generations.

In her nuanced piece, Aylin Eraslan, who herself is an earthquake survivor, examines the forced migration experience of Hatay residents after the February 2023 earthquakes, providing an in-depth analysis of the dual forces of transience and permanence shaping their lives. Grounded in ethnographic research conducted in various cities, her study sheds light on the resilience of individuals and communities as they balance their deep connection to their

homeland with the challenges of rebuilding their lives amidst displacement.

Fulya Doğruel, in the next article, explores how the Antakya earthquake affected business operations and livelihoods and emphasises resilience strategies and community recovery efforts. Post-disaster challenges such as financial instability, infrastructure collapse, and socio-emotional strains highlight the urgent need for sustainable recovery models that incorporate social equity, resilience, and targeted economic support.

Hande Birkalan-Gedik's article is a reflective analysis of *Masal Evi* (Story House), a community-driven initiative established in Halidere after the 1999 Marmara earthquake, which used traditional folktales as therapeutic tools for children coping with trauma. She delves into the transformative potential of storytelling in fostering psychological resilience, emotional expression, and community rebuilding. The article showcases how narratives became a means of healing, enabling children to navigate their experiences of loss and displacement.

While these articles tackle with the immediate impacts of earthquakes on communities, Meryem Bulut takes a different route in her article. She explores how mythological narratives across different cultures interpret earthquakes, mostly associating them with divine punishment or warnings linked to moral transgressions. Highlighting the symbolic diversity in these explanations, which reflect cultural beliefs and experiences, she also notes their similarities and the enduring relevance of such interpretations in modern contexts.

In the next article by Tülin Arseven turns the attention to the representation the number of earthquakes in Turkish literature. She notes that despite the frequency and devastation, stories focusing on the theme of earthquake in Turkish literature is very low. Selecting five stories, she tells the readers the specificity of earthquake themes in these important examples.

The following two articles focus on the relationship between media and earthquakes in different aspects. First, Erhan Arslan and Berna Arslan examine the framing of cultural heritage in Turkish media after the February 2023 Kahramanmaraş earthquakes, highlighting how historical and cultural assets were depicted in news coverage. Then, Dilar Diken Yücel and Ömer Faruk Yücel underscore the critical role of media as memory spaces in capturing and preserving the lived experiences of such extraordinary events. They examine how local media, exemplified by ER TV, contributed to crisis management, memory formation, and the rebuilding process, offering insights into disaster journalism and its societal implications.

In the next article, Cihan Sucu and Bengü Berkmen examine the impact of spiritual well-being and coping skills on post-traumatic stress disorder (PTSD) symptoms among survivors in Kahramanmaraş earthquake. They underline that their results indicate a positive relationship between higher levels of spiritual well-being and improved coping attitudes, suggesting that enhancing spiritual well-being may help earthquake survivors manage PTSD symptoms more effectively.

Ayşe Mahinur Tezcan and Veronika İnan analyse the occurrence of crimes in regions affected by the Kahramanmaraş earthquakes, utilizing statistical data to identify trends and changes in crime rates before and after the disaster. They reveal that while crime rates initially

decreased due to social solidarity, they later increased as societal disruptions unfolded, highlighting the complex relationship between natural disasters and criminal behaviour.

Tubanur Çelik İskifoğlu and Dönay Nisa Kara examine the psychological impact of this earthquake, focusing on the anxiety levels among survivors in the affected regions. They highlight the demographic factors influencing anxiety, emphasizing the need for tailored psychosocial interventions for young individuals and those with higher education levels.

Gül Kahveci and Nergüz Bulut Serin explore the heightened psychological challenges faced by mothers of children with autism spectrum disorder after the 6 February earthquake. They examine the stress, trauma, and coping mechanisms of these mothers, emphasizing the critical need for targeted mental health support and resilience-building strategies.

Our special issue concludes with an article by Murat Gökhan Dalyan, who writes about the historical and contemporary parallels in disasters and their impact within the context of Adıyaman's seismic history. He emphasizes that lessons have not been learned from these earthquakes, while also underlining how crucial it is to develop and implement earthquake policies and legislation to avoid human and material losses.

As we reflect on the wide-ranging impacts of earthquakes on communities, cultures, and individuals, this special issue brings together diverse perspectives to illuminate the profound interplay between disaster and the human condition. Through scholarly exploration of migration, resilience, psychological adaptation, cultural preservation, and historical parallels, the contributions deepen our understanding of how societies navigate the aftermath of devastation. We aim to provide a platform for understanding the intersection of natural disasters and human experience, to reflect on the lessons learned from past events, and to explore how communities can better prepare for and recover from such traumatic occurrences. With these issues in mind, we humbly dedicate this special issue to earthquake victims.

As we near the end, we as guest editors of this issue, should express our special thanks to our esteemed colleague, our journal editor, Associate Prof. Dr Mihrican Aylanç, who supported the publication of this issue in many different ways. Although she is not an earthquake survivor herself, unlike most of our contributors, she supported this issue with exceptional dedication and sensitivity, feeling the impact of the recent earthquakes deeply in her heart. As a part of the editorial communication, it became customary to report to each other at the end of the day for three of us during the production process. The special issue would not be possible without her dedication and commitment. We were distant in geographies but always near at heart. We are deeply grateful to her for her unwavering dedication and heartfelt support throughout the process of preparing this special issue.

We had announced that this special issue would be in English, although we anticipated the language challenges it might pose for some authors. The reason was that we aimed to ensure articles about the earthquakes in Turkey could reach a broader audience. We hope that this special issue reaches this aim. Yet, within its pages lies a single piece in Turkish—a heartfelt eulogy penned by Bengü Berkmen of Cyprus International University. As this issue is dedicated to all who tragically lost their lives in all earthquakes, it is also a tribute to an

unspeakable sorrow that pierced the heart of the island: the loss of young middle and high school Turkish Cypriot volleyball players, their coaches and parents, who perished while in Türkiye for this competition. We offer this piece in Turkish, as a gesture of solace and remembrance for the bereaved families.

To close, we turn to the evocative words of Cemal Süreya, whose poetry captures the ineffable essence of loss and hope in the wake of such calamities.

### **Afyon Garındaki**

Afyon garındaki küçük kıızı anımsa, hani,  
Trene binerken pabuçlarını çıkarmıştı;  
Varto depremini düşün, yardım olarak Batı'dan  
Gönderilmiş bir kutu süttozunu ve sutyeni.

Adam süttozuyla evinin duvarlarını badana etmişti,  
Karısıysa saklamıştı ne olduğunu bilmediği sutyeni,  
Kulaklık olarak kullanmayı düşünüyordu onu kışın;  
Tanrım, gerçekten çocukluk günlerinizde mi? ...

Eşiklere oturmuş bir dolu insan  
Keşke yalnız bunun için sevseydim seni.

**Cemal Süreya, Güz Bitiği**

Frankfurt am Main, 30 Kasım 2024

# Şampiyon Meleklerin Ardında: Kahramanmaraş Depreminin Kıbrıs'a Yansıyan Acısı

Bengü Berkmen\*

*“Evlât kaybı, dünyada en dayanılmaz acıdır.  
Bir çocuğun öldüğü bir gün, bir annenin kalbi sonsuza dek ölüür.”*

*Victor Hugo*

Ölümü konuşmak her zaman zor olmuştur. Çünkü ölüm, bir bilinmezlikler diyarıdır. Birinin ölümü, dünyanın tüm renklerinden uzaklaştığı, hayatın anlamsızlaştığı ve zamanın bir süre için durma noktasına geldiği bir dönemdir. 6 Şubat 2023 tarihi de böyle tarihlerden birisidir. Kahramanmaraş depremi, insanlık için sadece bir tarih olmaktan çıkmış, kalplerimize hiç iyileşmeyecek yaralar bırakan bir felaket olarak kazanmıştır. Öyle ki, sabaha karşı başlayan sarsıntı Kuzey Kıbrıs'ta da çok şiddetli hissedilmiş, yaşanan depremin merkezinin kilometrelerce uzakta olduğu öğrenildiğinde büyük kayıpların olduğunun anlaşılması çok uzun sürmemiştir. Bir süre haber kanallarından ve sosyal medya platformlarından sağlıklı bilgi alınamamış, ancak sabahın ilk ışıklarıyla Türkiye'deki bazı şehirlerin yok olduğu anlaşılınca tahribatın boyutu netleşmiştir.

Depremden birkaç saat sonra, çok sayıda kişinin yaşamını yitirmesinin yanı sıra, o tarihlerde Türkiye'deki spor müsabakalarına katılmak için Türkiye'ye giden Gazimağusa Türk Maarif Koleji voleybol takımı öğrenci, öğretmen ve velilerinin de deprem bölgesinde oldukları ve kendilerinden haber alınamaması ile ülkede hayat durma noktasına gelmiş, tüm gözler Adıyaman'a kilitlenmişti. Bu süreçte, bölgeye 6 Şubat akşamında Sivil Savunma Teşkilatı Başkanlığı, Güvenlik Kuvvetleri ve AKUT'a bağlı ekipler, arama-kurtarma çalışmalarına başlamıştır (Kıbrıs Postası, 2023). Arama-kurtarma ekiplerine, KKTC Cumhurbaşkanlığı tarafından oluşturulan kriz masasına bağlı yetkililer, doktorlar, hemşireler, sağlık ekipleri, vinç ve operatör kullanıcıları, Doğu Akdeniz Üniversitesi ve Girne Amerikan Üniversitesi Kurtarma ekipleri ile birlikte meslek örgütlerinden avukatlar, mimar ve mühendisler ile psikologlardan oluşan kapsamlı bir çalışma ekibi deprem bölgesindeki kurtarma faaliyetlerinde görev almışlardır (KKTC Enformasyon Dairesi, 2023). Tüm ülke, çocuklarını enkazdan sağ kurtarabilmek için varını yoğunu ortaya koymuş, enkaz bölgesinden gelecek iyi bir haberi beklemeye koyulmuştu. Kayıpların cansız bedenlerine ulaşıldıkça, ülkedeki endişeli bekleyiş, yerini karanlık bir sessizliğe, yoğun bir acıya ve çaresizliğe bırakmıştı.

Depremden sonraki altıncı günde, müsabaka için orada olan 39 kişilik ekipten sadece 4 kişi hayata tutunabilmişti (Haber Kıbrıs, 2023). Bu haberle hayatlarımız durma noktasına gelmiş, yere göğe sığamaz olmuş, sanki çocukların yaşadıkları Gazimağusa'ya düşen ateş, karanlıkta kalan tüm ülkeden görünür ve yakıcılığı hissedilir hale gelmiştir.

Kıbrıs, tarih boyunca birçok medeniyete ev sahipliği yapmış bir adadır. Medeniyetlere ev sahipliği yapmak yanında birçok savaşı da beraberinde getirmiştir. Bunun en yakın örneği ise adanın yaklaşık 70 yıl öncesinden gelen 1963-74 savaş geçmişi ve kayıplarının olmasıdır. Henüz savaşa dair kuşaklararası iletilen travmalar devam ederken, Kahramanmaraş depreminde çocukların kaybedilmesi, tüm ülkenin yarasını dağlamakla kalmamış, yeni yaralar açmıştır. Bu nedenle, Kahramanmaraş depremi, 1963-74 yıllarındaki olaylardan sonra Kıbrıslı Türkler için ikinci en büyük toplu kayıp ve travma olarak nitelendirilebilir (Öze, 2024).

Toplumsal travmalar, toplumun geniş bir kesimini etkileyen, genellikle doğal afetler, savaşlar, göç, büyük çaplı şiddet eylemleri ya da ekonomik krizler gibi olaylar sonucu ortaya çıkan derin travmalardır. Bu travmatik olaylar, toplumun genelinin sosyal, kültürel, psikolojik ve ekonomik anlamda gerilemesine, geçmiş ve geleceğe dair inançlarının sarsılmasına neden olur ve farklı müdahaleleri gerektiren bir durum yaratır. Toplumsal travmalarda, topluluklar içinde benzer psiko-sosyal belirtiler olsa da, travmanın ruh sağlığını ne ölçüde etkileyeceği, kültürel farklılıklar, travmanın kronikleşmesi ve anlamlandırmadaki değişkenliklerle ilişkilidir (Öztürk & Derin, 2023). Söz konusu travmalar, toplumun kendi içinde kutuplaşmasına ve ayrışmasına da neden olabilir. Bununla birlikte, travmanın boyutuna bağlı olarak geleneksel ya da kültürel değerlerde dönüşümler ya da krizler ortaya çıkabilir. En önemlisi de toplumlar yaşadıkları travmayı kolektif hafızalarında tutar ve sonraki nesillere aktarırlar.

Kıbrıs Türk toplumunun halihazırda bir toplumsal travma ve buna bağlı travmatik yas süreci belleği olduğu düşünüldüğünde, bu süreçte halk, toplumsal travmanın olumsuz sayılabilecek etkilerine karşı birlikte hareket etmeyi başarmış ve çok güçlü bir duruş sergilemiştir. Bir yanda kum yığımına dönen enkazdan gençlerin cansız bedenleri çıkarılırken, diğer yanda toplum, yaşanan kayıp ve yas sürecine hazırlanmaya başlamıştır. Okullarda öğretmen ve öğrencilere yönelik yas ve yaşayabilecekleri olumsuz duygularla ilgili eğitimler düzenlenmiş, yaşananlardan ötürü zorlanan bireyler için telefon destek hatları ve müdahale ekipleri oluşturulmuştur. Birçok meslek örgütü, kendi bünyesinde topluma destek vermek için kendi alanında çalışmalar yapmıştır.

Birçok kişinin cesedine ulaşamayan Kahramanmaraş depreminde, Kıbrıslı gençlerin cenazelerine ulaşılması oldukça önemli bir noktadır. Çünkü yas sürecinin başlayabilmesi için bedenin ortada olması, diğer bir deyişle defnedilmesi gerekir. Ancak beden ortada yoksa, kişinin ölmemiş olma, geri gelebilecek olma ihtimali/düşlemi hep canlı kalır. Beden ortada yoksa acıyı hafifletebilecek hiçbir şey yapılamaz. Kıbrıs'taki 1963-74 yılları arasında hayatını kaybeden birçok kişinin cesedi günümüzde hala aranmaya devam edilmekte ve birçok aile, çok küçük de olsa umutla kayıplarının akıbetini merak etmektedir. Bu nedenle, çocukların



cenazelerinin ülkeye getirilmesi ve defnedilmesi, ülkedeki yas sürecini başlatmıştır.

Travmatik bir kayıp sonrasında yas tutan kişiler için en büyük risklerden birisi de hissedilebilecek en yaygın duygulardan biri suçluluk duygusudur (Stroebe, Schut & Stroebe, 2007). Bu duygu, bireyin kendi kişisel standartlarına uymadığı veya yaşamadığını kabul ettiği, sevilen birinin kaybı sonrası yaşanan pişmanlık veya pişmanlığın duygusal bir tepkisi olarak “Hayatta kalan sendromu” ismiyle tanımlanmaktadır (Li, Stroebe, Chan & Chow, 2017). Toplumsal travma mağduru olan yetişkinler, çocuklarını koruyamadıkları için suçluluk ve utanç duyguları yaşayabilirler. Bu duygu, özellikle kaybedilenin ölüm şeklinin baş edilemeyecek biçimde şiddet içeren bir ölüm olmasıyla daha da pekişmektedir (Avcı, 2023). 6 Şubat depremi sonrasında enkaz bölgesinden gelen haber ve görüntüler nedeniyle birçok kişi suçluluk duygularıyla mücadele etmek zorunda kaldı (Ak, 2023; Öze, 2024). Bu noktada, bir yandan kayıpla ilgili hukuksal mücadeleyi sürdürmek, diğer yandan da bu duyguyla mücadele edebilmek adına atılan en somut adımlardan birisi, “Şampiyon Melekleri Yaşatma Derneği”nin kurulması olmuştur (Kıbrıs Postası, 2023b). Böylelikle en başta çocuklarını kaybeden aileler ve sonrasında toplumun diğer kesimi, bu oluşumun içerisinde yaşanan travmatik deneyimi paylaşmaya, dönüştürmeye ve en önemlisi de yas sürecini birlikte yaşamaya çalışmaktadırlar. Derneğin kurulmasının ardından, sadece Kıbrıslı Türkler’in değil, aynı zamanda Türkiye’deki benzer durumdaki birçok kişinin de takip ettiği “İsias Davası” adalet arayışındaki sembol davalardandır. Aileler, daha fazla travmatize olma pahasına seslerini duyurabilecekleri her platformda çocuklarını nasıl ihmal sonucunda kaybettiklerini anlatmakta ve seslerini duyurmaya çalışmaktadır. Onların bu acılı mücadelesinde toplumun bir arada olması, birçok meslek kuruluşunun davayı takip etmesi ve desteklemesi, yaraların sarılmasında çok önemli bir kolektiflik duygusu yaratmaktadır.

Toplumsal travmanın iyileşmesi “travmatik yaraları sarmak, ilişki kurmak ve yaşamı tekrar inşa etmek” ile mümkün olabilecektir. Dolayısıyla, yaşanan bu acı deneyimin tüm gerçekleri ve tanıkları ile anlatılıyor ve biliniyor olması gerekmektedir. Çünkü travma mağduru her birey, yaşadığı toplumun adaletine ihtiyaç duymaktadır (Zara, 2018). Adalet duygusunun sağlanması ile yaralar sarılacak, yaslar tutulacak ve iyileşme olabilecektir (Volkan, 2000).

6 Şubat depremi, Kıbrıslı Türkler’in ve tüm Türkiye’nin yüreğine derin yaralar açarken, bu melekler, hayatını kaybeden çocukların hatıralarıyla birlikte yaşama tutunmamıza yardımcı oluyorlar. Onlar, enkazdan çıkarılan bedenlerin ötesinde, bizim için birer sembol haline gelmiş durumda: Acının, kaybın, belirsizliğin içinde bir dayanışma, bir araya gelme çağrısı. Şampiyon Melekleri Yaşatma Derneği ile bu acı, yalnızca bir kayıp olarak kalmıyor; aynı zamanda, yaşama karşı bir direnişe, adalet arayışına, birlikte iyileşmeye dönüşüyor. Her bir melek, yaşadığımız travmanın sadece karanlık yanını değil, aynı zamanda karanlıkta kalan kalplerimize dokunan bir ışık huzmesini de simgeliyor. Bu acı, evlat kaybının tarifsizliğini hissettirse de onlara olan sevgimiz ve onların hatırası, bizlere yaşamı yeniden hatırlatıyor. Ve böylece, her geçen gün, bu yaraların sarılması için, onların anılarına saygı duyarak, bir adım daha ileriye gitmiş oluyoruz.

## Kaynakça

- Ak, M. (2023). *Ah be çocuk. Korumamadık sizi...* Kaynak: <https://www.yeniduzen.com/ah-be-cocuk-koruyamadik-sizi-161137h.htm>
- Avcı, M. (2023). Travmatik yas yaşayan ve yaşamayan bireylerde suçluluk: Psikodinamik bakış açısı. *Türkiye Bilimsel Araştırmalar Dergisi*, 8(2), 246–259.
- Haber Kıbrıs. (2023, 14 Şubat). *Depremde hayatını kaybeden KKTC vatandaşı sayısı 49'a yükseldi.* <https://HaberKibris.Com/Depremde-Hayatini-Kaybeden-Kkte-Vatandasi-Sayisi-49a-Yukseldi-1240-2023-02-14.Html>.
- Kıbrıs Postası. (2023a, 7 Şubat). *KKTC'den giden ekiplerin deprem bölgesindeki arama-kurtarma faaliyetleri sürüyor.* [https://Www.Kibrispostasi.Com/C35-KIBRIS\\_HABERLERI/N458822-Kktcden-Giden-Ekiplerin-Deprem-Bolgesindeki-Aramakurtarma-Faaliyetleri-Suruyor](https://Www.Kibrispostasi.Com/C35-KIBRIS_HABERLERI/N458822-Kktcden-Giden-Ekiplerin-Deprem-Bolgesindeki-Aramakurtarma-Faaliyetleri-Suruyor)
- Kıbrıs Postası. (2023b). Şampiyon *Melekleri Yaşatma Derneği* kuruldu. [https://www.kibrispostasi.com/c35-KIBRIS\\_HABERLERI/n464228-sampiyon-melekleri-yasatma-dernegi-kuruldu](https://www.kibrispostasi.com/c35-KIBRIS_HABERLERI/n464228-sampiyon-melekleri-yasatma-dernegi-kuruldu)
- KKTC Enformasyon Dairesi. (2023, 8 Şubat). *Cumhurbaşkanlığı Deprem Kriz ve Koordinasyon Komitesi: "Arama kurtarma ile sağlık ekipleri afet bölgesine ulaştı".* <https://Pio.Mfa.Gov.Ct.Tr/Cumhurbaskanligi-Deprem-Kriz-ve-Koordinasyon-Komitesi-Arama-Kurtarma-Ile-Saglik-Ekipleri-Afet-Bolgesine-Ulasti/>.
- Li, J., Stroebe, M., Chan, C. L. W., & Chow, A. Y. M. (2014). Guilt in bereavement: A review and conceptual framework. *Death Studies*, 38(3), 165–171.
- Öze, N. (2024). 2023 Kahramanmaraş merkezli depremlerdeenkaz altında kalan Kıbrıs Türk voleybol takımı haberlerinde doğruluk sorunu: Enformasyon, misenformasyon, dezenformasyon. *Akademik Yaklaşımlar Dergisi*, 15(1-Deprem Özel Sayısı-), 515–543. <https://doi.org/10.54688/ayd.1385620>
- Öztürk, E., & Derin, G. (2023). Dissoanaliz kuramı açısından savaş psikolojisi ve göç travması: Savaş kökenli kuşaklararası travma geçişi ve kuşaklararası psikopatoloji aktarımı. E. Öztürk (Ed.), *Savaş Psikolojisi içinde Türkiye Klinikleri*, pp. 36–51.
- Stroebe, M., Schut, H., & Stroebe, W. (2007). Health outcomes of bereavement. *The Lancet*, 370(9603), 1960–1973. [https://doi.org/10.1016/S0140-6736\(07\)61816-9](https://doi.org/10.1016/S0140-6736(07)61816-9)
- Volkan, V. D. (2000). Traumatized societies and psychological care: Expanding the concept of preventive medicine. *Mind and Human Interaction*, 11(177), 194.
- Zara, A. (2018). Collective trauma cycle: The healing role of reconciliation, forgiveness and restorative justice in collective traumas (tur). *Journal of Clinical Psychiatry*, 21(3), 301–311. <https://doi.org/10.5505/kpd>.



*Şampiyon Melekleri Yaşatma Derneği'ne bu görsel için teşekkür ederiz.*



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Araştırma makalesi/Research article

# The Impact of the 1966 Earthquakes on Migration and Social Change: A Case Study of Varto (Türkiye)

1966 Depremlerinin Göç ve Toplumsal Değişim Üzerindeki Etkisi: Varto (Türkiye) Örneği

Erdoğan Gedik\*

## Abstract

This article examines the impact of the 1946 and 1966 Varto (Türkiye) earthquakes on migration and social change, with a particular focus on migration to Istanbul and Germany. Located at the intersection of sociology of disaster and sociology of migration, it explores how adaptation to new cultural contexts affected migrants' social and cultural lives, particularly their marriage patterns, family structures, and gender dynamics, in part giving way to the emergence of the *Almancı* identity and the role and the importance of "home" and "homeland" for these migrants. The article also addresses internal migration to Istanbul, emphasising the significance of neighbourhoods, *hemşehri* relationships, and village associations as "buffer mechanisms," which also caused to the revival of tribal structures within the context of migration. Drawing on the first-hand, personal accounts, I highlight the immediate trauma and loss caused by the earthquakes, reviewing the limited scientific research

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on the long-term social and psychological impacts of the disaster. I examine the social issues arising from “forced migration” after the earthquake, including state support and accommodation in boarding schools. Although these schools provided educational opportunities outside Varto, which facilitated social advancement, they also separated families from their children, profoundly influencing family structures. Finally, the article analyses the traditional architecture in Varto after the (1946 and) 1966 earthquakes, which developed not only as a post-earthquake reflection but also as a response to internal and transnational migration. Here, the focus is on the use of new materials and construction techniques, the integration of modern elements, and the associated shifts in local daily practices.

**Keywords:** *earthquake and social engineering, migration, trauma, Germany, social change, hemşehri associations, gender*

## Öz

Bu makale, 1946 ve 1966 Varto (Türkiye) depremlerinin göç ve toplumsal değişim üzerindeki etkilerini, özellikle İstanbul ve Almanya’ya yönelik göçlere odaklanarak incelemektedir. Afet sosyolojisi ile göç sosyolojisinin kesişim noktasında yer alan bu makale, yeni kültürel bağlamlara uyum sağlama sürecinin göçmenlerin toplumsal ve kültürel hayatlarını, evlilik yapılarını, aile ilişkileri ve toplumsal cinsiyet dinamiklerini nasıl etkilediğini ele almakta; bu süreçte Alman kimliğinin ortaya çıkışını ve “ev” ile “memleket”in göçmenler için önemini vurgulamaktadır. Makale, ayrıca İstanbul’a yönelik iç göçleri ele alırken; mahalleler, *hemşehri* ilişkileri ve köy derneklerinin “tampon mekanizmalar” olarak önemine değinmekte ve göç bağlamında aşiret yapılarının yeniden canlanmasına yol açan etkilerini incelemektedir. Makale birinci elden, kişisel anlatılara dayanan görüşmelerden yola çıkarak, depremlerin neden olduğu ani travma ve kayıpları vurgulamakta; felaketin uzun vadeli toplumsal ve psikolojik etkileri konusunda sınırlı olan bilimsel araştırmaları da eleştirmektedir. Deprem sonrası ortaya çıkan “zorunlu göç” ile ilgili sosyal sorunlar, yatılı okullardaki barınma olanakları da makalenin bir başka önemli boyutudur. Bu okullar, her ne kadar Varto dışında eğitim fırsatları sunarak toplumsal ilerlemeye katkıda bulunsa da, aynı zamanda aileleri çocuklarından ayırarak aile yapıları üzerinde derin etkiler yaratmıştır. Son olarak, makale (1946 ve) 1966 depremlerinin ardından Varto’daki geleneksel mimariyi incelemekte; bu mimari değişimlerin yalnızca deprem sonrası bir yansıma değil, aynı zamanda iç ve ulusötesi göçe bir yanıt olarak geliştiğini de öne sürmektedir. Burada, yeni malzemelerin ve inşaat tekniklerinin kullanımı, modern unsurların entegrasyonu ve buna bağlı olarak gündelik pratiklerdeki değişimlere odaklanıyorum.

**Anahtar sözcükler:** *deprem ve sosyal mühendislik, göç, travma, Almanya, sosyal değişim, hemşehri dernekleri, toplumsal cinsiyet*

### **The one at the Afyon Train Station**

Remember the little girl at the Afyon train station, you know,  
How she had taken off her shoes before boarding the train;  
Think of the Varto earthquake, and the aid sent from the West  
A box of powdered milk and a bra.

The man had whitewashed his walls with powdered milk,  
His wife, had hidden away the bra, unsure of what it was,  
Thinking to use it as earmuffs in winter;  
My God, was it truly during your childhood days? ...

A throng of people sat on the doorways,  
I wish I had loved you only for this.

Cemal Süreya, Güz Bitiği<sup>1</sup>

### **Introduction**

Earthquakes, inherently classified as “natural disasters,” are thought to be distinct from “man-made” disasters like wars. However, their impact extends beyond physical destruction, sparking multifaceted social and political debates that transform them into significant societal events. They can trigger immediate devastation, while also driving long-term cultural, psychological, and socio-economic shifts for the humans who endure them. One such shifts, are internal and external migration movements in Türkiye, and have been, for the most part, driven by several earthquakes.

This is no wonder, the word “earthquake” first evokes notions of destruction and death; followed by solidarity, collective suffering, and pain. Over time, as the earthquake recedes into the past, concepts such as trauma, homelessness, orphanhood, poverty, helplessness, crisis, chaos, harm, exploitation, migration, and injustice emerge. These concepts also point to social and societal disasters that will manifest as different consequences of earthquakes.

The 1966 Varto earthquake, which is the point of departure for this article, remains a significant collective trauma in the memory of Vartoers, now dispersed across various parts of Türkiye and Europe, even decades after the catastrophe. As I argued elsewhere (Gedik, 2008), one can feel the most impactful aftershocks of earthquakes not just on earth but among the people-this is what I called the migration after the 1966 Varto earthquake a “social aftershock.” Discussions surrounding post-earthquakes may raise questions regarding the causes of the earthquake, the preventability of its damage, overcoming its consequences, and whether anything has been learned from these events. This is why great



earthquakes like that of 6 February 2023, beyond being a natural disaster, is also “human” disaster because of its social, political, psychological, and economic effects on people.

Decisions regarding the protection of people from the deadly impacts of disasters are expected to be made by the political and social institutions of both state and local governments. However, as we have seen in the recent earthquakes, and as demonstrated by the media and public opinion, decisions about where and how people will live are often shaped not by scientific data and urban and regional planning, but by the priorities of political and social institutions or the desires of property owners. Therefore, when the earthquake of 6 February 2023 shook an immense area and killed several thousand people, the public immediately questioned all responsible political and social institutions. This is because these institutions are responsible for preparing people for disasters and protecting them from the lethal consequences. When they fail to fulfil these duties, the scale of the disaster becomes terrifying, and, as a result, these institutions are blamed. Therefore, as we saw in the earthquake of 6 February 2023, natural disasters once again proved to be highly sociopolitical and socio-economic events.

The 2023 earthquake revealed striking parallels with the 1966 Varto earthquakes, underscored the explore the enduring relevance of “social aftershocks”, and inspired me to reconsider my earlier study. Thus, this article departs from the core findings in my fieldwork I conducted in Varto, Istanbul and Mersin between 2002 and 2005 as part of my doctoral studies (Gedik, 2008), and later in 2008 and 2012 in various cities in Germany, where I explored the key social, cultural, economic, and linguistic transformations in Varto. It specifically provides insights into the effects of migration on family structures, gender dynamics, and cultural identities of migrants in Istanbul and Germany. By exploring these changes, my previous study highlighted the long-term impacts of natural disasters on migration and the resulting shifts in local communities both in Türkiye and in Germany,<sup>2</sup> now I aim to take these analyses into new dimensions.

Climate and weather-related events and other forms of natural disasters have significantly influenced migration patterns throughout history. Building on this perspective, this article connects the themes of migration and social change to the case of Varto and argues that similar causes are likely to produce comparable outcomes. Understanding these patterns is crucial for minimizing future impacts and fostering resilience. While earthquakes and other disasters cannot be entirely prevented—just as migration in their aftermath is inevitable due to physical and socio-economic constraints, the scale of destruction can be mitigated. In a country like Türkiye where 94% of the landmass is in a seismic zone, no region is entirely safe. That said, however, safer living spaces can be constructed to reduce the impact of earthquakes.

## **1. Theoretical and methodological framework**

This article is located at the intersection of sociology of migration and sociology of disasters in the example 1966 Varto earthquakes. According to Thomas Faist, a leading

scholar in migration sociology, migrants are persons who settle in countries other than their country of origin. Furthermore, migration is a movement that involves not just a permanent relocation but includes various forms of mobility, such as seasonal work and the return migration from previous destination countries (Faist 2020: 3-6). In the case of Türkiye, migration to Germany has been primarily framed in relation to *Gastarbeiter Migration* (guest worker migration) and is often broadly framed as being driven by “economic reasons.” While this perspective is accurate, it is incomplete. Drawing on sociology of disasters, my research aims to expand this framework by examining the case of Varto, illustrating the deeper complexities behind these so-called “economic hardships.”

Sociology of disasters explores how people perceive, prepare for, respond to and recover from disasters, examining factors like race, class, gender, and age that influence vulnerability and survival. It investigates evacuation decisions, the role of popular culture in shaping perceptions, and prevalent disaster myths (Herring 2013, 927). This article builds on the work of Lars Clausen (1985) and Wolf R. Dombrowsky (1985; 1987; 1995), connecting the study of disasters to migration, especially as the potential for widespread displacement grows in our interconnected world. Approaches to understanding the impact of natural disasters on migration vary, ranging from statistical analyses to systems approaches (Belasen and Polachek, 2013: 311). However, focusing on personal narratives and testimonies is crucial for capturing the human experience, as disaster-induced migration involves diverse groups such as guest workers, refugees, and academics. Furthermore, in some cases such as droughts one can speak about “nomadic migration” in search of water, while in other cases, impoverished populations-particularly in developing countries-mobilize only after extended waiting periods (Hering, 2013: 312). These specific examples highlight that the link between disasters and migration is complex and multifaceted. It should not be oversimplified into a single, one-way pattern; instead, it reveals a network of diverse and interconnected causes and effects.

In the context of the 1966 earthquakes, migration from Varto took place as individual internal migration and as guest worker migration to Germany that developed as a part of “social engineering.”<sup>3</sup> This is because guest worker migration was seen as a solution to the increasing economic decay and unemployment in Türkiye in the 1960s. While some saw this as a positive factor, however, it also became a source for further problems for the people experiencing migration, doubling the “after-shocks” of the earthquake. Therefore, it is crucial to consider this phenomenon within a broader context of disaster-induced displacement.<sup>4</sup> Studies (Ingham, Islam & Hicks (2019) highlight the growing significance of climate change in exacerbating disaster risks and displacement globally. Comparing the Varto experience with cases influenced by climate-related disasters can offer insights into the diverse factors shaping migration decisions and the long-term consequences for affected communities.

Although my research also draws on reports and post-earthquake observations by geologists and seismologists, the core of my analysis is based on interviews with people



from Varto who migrated to major metropolises like Istanbul and various cities in Germany. These personal testimonies and narratives from earthquake witnessing provide invaluable insights, revealing how both the earthquake and the migration experience are remembered. Using Jan Assmann's framework, these memories can be categorized as communicative and cultural; the former referring to everyday, living memories expressed through storytelling, rituals, and personal recollections; the latter consisting of official, monumental records that canonize the event (Assmann, 2018). Moreover, as someone from the region, having personally experienced the retelling of earthquake stories and memories as a child, I saw them being shared and reshaped by different people over time, which adds another layer to my understanding of the lasting impact such disasters have on collective memory.

## **2. Varto: Impressions on geography, topography and history**

Located in Türkiye's Eastern Anatolia region, Varto lies in the upper Murat area of Muş Province. Covering 1,418 km<sup>2</sup> (17.3% of the province), it sits at an altitude of 1,650 meters, surrounded by Muş to the south, Tekman and Hınıs to the north, and Solhan and Karlıova to the west. The district's rugged terrain is dominated by the Şerafettin (2,544 m), Hamurped (2,879 m), and Bingöl (3,194 m) Mountains, with features like the Great and Small Hamurped Lakes and numerous streams, including the Goşkar and Gulciye Rivers. The region's vegetation reflects its continental climate, comprising steppe plants, meadow grasses, and oak forests (Gedik, 2008: 34-36).

Austrian botanist Karl Georg Theodor Kotschy (1813-1866) documented Varto's geography, flora, and culture during his 1859 expedition. He vividly described the Bingöl Mountain's rugged peaks, fortress-like cliffs, and numerous shallow lakes, earning it the name "the mountain of a thousand lakes." Kotschy also observed the stark contrast between the northern slopes, with withered vegetation, and the Goşkar canyons, where plant life bloomed vibrantly. He highlighted the region's abundant water sources, including springs and funnel-shaped basins, as well as the fertility of its soil and productive harvests (Kotschy, 1860: 69-70).

The tectonic Varto basin, locally called "Gola Varto" or "Çala Varto," stretches 12 km wide and 40 km long along the Varto Fault Zone. Kotschy remarked on the unique use of manure for heating, a necessity in a region with limited forests and abundant livestock. Village settlements, shaped by security concerns and harsh winters, resembled anthills, with houses partially dug into the ground and covered in ash and soil. He noted the prevalence of chronic eye diseases among locals, likely due to environmental conditions. Despite these challenges, the region thrived with buffalo herds, trout-filled rivers, and diverse wildlife like bears, foxes, and partridges. Kotschy's accounts reflect Varto's challenging environment and the resilience of its people, who adapted their lives to the demands of nature. His detailed observations remain a testament to the region's natural beauty, cultural richness, and the interplay between geography and daily life.

### **3. Varto's geography and climate and their influence on the economy and socio-political organization**

A comprehensive understanding of Varto requires an analysis of how social organization influences its political and economic structures and how these, in turn, are shaped by the region's climate and geography. Located in tectonically active zones, Varto faced challenges such as natural disasters and environmental degradation, hindering the sustainable development of the region and its population. The region's short growing season limits agricultural opportunities, threatening food security and economic diversification for its residents. While sparse forests and extensive grasslands promote livestock farming, animal husbandry and related products play a leading role in the local economy.

Varto's economic organization is closely tied to its social and political structures. In harsh conditions, communities are compelled to develop cooperation and resilience, often leading to tribal-based systems of organization, which shape collective identity, with traditions and local leadership serving as mechanisms to address challenges. In tightly knit communities, solidarity, supported by strong kinship ties, is vital.

Following earthquakes, internal and external migration have reduced unemployment and diversified economic resources. Remittances from Vartoers working abroad, colloquially referred to as *Almancı*,<sup>5</sup> have bolstered the local economy (Gedik, 2010, 2011). Nonetheless also with some negative impacts, these remittances included not only money but also goods such as clothing, medicine, household appliances, and even school supplies. The most outstanding negative impact is that the Vartoers have become dependent on these remittances, as the animal husbandry and agricultural production were decreased.

### **4. Earthquakes in Varto from a historical perspective**

Varto and its environs, located at the intersections of the North Anatolian Fault System and the East Anatolian Fault System, have witnessed several devastating earthquakes in history, including those in 1784, 1866, 1916, 1946, 1950, 1966, and 1971. Because of the lack of sufficient documentation about many earthquakes since the 1700s, their impact on human life in the area remains unclear. Information about early quakes, particularly those in 1784, 1866, and 1916, often comes from notes by geologists, seismologists, and the reports of foreign consulates. Most prominently, geologist N. N. Ambraseys, renowned for his research on the history of earthquakes and historical seismic events, provides us with some information about these earthquakes (Ambraseys 1997: 293; Gedik, 2008: 372).

The earthquake that struck on 13 July 1784 was a catastrophic event that had a lasting impact on the region, resulting in considerable damage and a high death toll. N. N. Ambraseys notes that it caused extensive damage in Erzincan, Erzurum, Karlıova, and Varto, with an estimated death of 12,000 people (Ambraseys 1997: 293; also, Koçyiğit 2005). Considering the population density at the time, this loss equated to about 50% of the population. The earthquake of 12 May 1866 also left a disturbing mark on greater Varto region, causing massive destruction (Ambraseys 1997: 290–291). It destroyed the entire area, including the eastern part of Kiğı, reaching Varto. Based on second-hand accounts or oral testimonies,

reports from the French and British consulates in Erzurum also mention this disaster as razing almost the entire population in the area.

The 24 January 1916 earthquake, although significant in magnitude, remains poorly documented due to the wartime circumstances of the period. Ambraseys states that the 1916 earthquake was detected by European stations and had a magnitude of 7.2. Due to censorship during World War I, extraordinarily little information has survived about the earthquake. As a result of the war and the Armenian deportations during this time, earthquake news was heavily censored, so there was no widespread dissemination of it. Foreign newspapers in the Ottoman Empire were largely shut down or they were operated under German control. Limited information about the earthquake was sought from German archives, but most documents were lost during the war (Ambraseys, 1993: 293).

The most significant earthquake until the 1966 earthquake was that of 31 May 1946. However, there is truly little information about this catastrophe. The accounts provided by the mining and petroleum engineer Cevat Eyüp Taşman, who conducted research in the region after the earthquake, remains the primary source of information on this event. Taşman underlined that the earthquake that struck at 5:15 a.m. on 31 May 1946, lasted for 17 seconds, resulting in 839 deaths and 343 injuries, as well as the total or partial destruction of 1,986 buildings (Taşman, 1946: 287). He underlined that because many people were already outside in the fields, the earthquake led to a relatively lower percentage of fatalities in residential buildings. With a normal population of 13,000 and 2,355 buildings, the death rate was 6.4%, while 84% of the buildings were either partially or completely destroyed. It is important to note, however, that the considerable damage to buildings was more attributable to the use of poor construction materials, such as round stream boulders and irregularly trimmed poplar and willow wood, rather than the severity of the earthquake itself (Taşman, 1946: 291). Despite these written reports, the villagers from Varto underlined that the death toll in the 1946 earthquake could be much higher than what has been recorded. In short, the most significant earthquakes since the beginning of the twentieth century were those of 1946 and 1966. Although two others (1950 and 1971) took place in Varto, they did not result in large-scale loss of life or property, and did not leave a significant mark in the memory of the region's people or in the records.

#### **4.1 The 1966 earthquakes and migration**

The two 1966 earthquakes of 1966 are the focal point of this study due to their major impact on Varto, particularly in triggering mass migration and subsequent transformations. Prior to the earthquakes, the 1965 census recorded Varto's population at 33,689 (Muş İl Yıllığı 1967). However, the devastation caused by the 1966 earthquake significantly reduced the district's population. By 1967, Varto was recorded as the least populous district in Muş Province, according also to data from the Muş Provincial Yearbook. The long-term impact of this migration is evident today. As of 2024, Varto's total population, including its villages, is 30,183, showing minimal growth over nearly six decades. This suggests that a population

equivalent to Varto's current size now lives elsewhere, underscoring the lasting effects of the earthquake and the resulting displacement, which continue to shape the region 58 years later.

As the individuals I interviewed in Varto noted, there was a desire to migrate following the 1946 earthquake. However, the material conditions for migration were not yet favourable. Most importantly, there were no proper roads or vehicles available for travel from the villages. The first wave of mass migration occurred with the 1966 earthquake, primarily to western Türkiye and Germany. Through social networks, particularly the *hemşehri* networks established during this time, Varto residents continued to migrate (Gedik, 2011). Over time, social networks expanded and became stronger, ultimately becoming indispensable tools for migrant solidarity.

After the earthquake, the housing and socio-economic problems in Varto could not be resolved immediately and several families started to migrate in Türkiye. Although in general rescue attempts had failed, several rescue teams came to the region—including student groups from Türkiye—and several countries sent money and materials. Rıza Tolay, who was the village head of Raqasa had underlined that, if one is to account for the money sent by the Saudi King Faisal alone, it added up to £ 70,000 which the Turkish newspapers also confirmed (Dünya, 24 August 1966; Hürriyet, 24 August 1966). Also important in this earthquake is that the recently signed guestworkers agreement with Germany came to the rescue, since Varto was identified as a “priority region” for guest worker migration.

#### 4.2. Migration from Varto to Istanbul

In my interviews, the earthquake survivors stated that they did not initially have the intention to migrate in the first days after the earthquake; however, they later developed the intention to migrate due to the failure to address their urgent post-earthquake needs in a timely manner. Mustafa Işıkbaş, one of the first people to migrate from Varto to Istanbul, recounted his journey to Istanbul as follows:

After the earthquake [of 1966], we stayed for a few months in a hut built for us by the government. Then, in the fall of 1966, we migrated to Istanbul. We entrusted our animals to my *musahip*<sup>6</sup> Cafer Sarıkbaş. Since we didn't know what awaited us in Istanbul, we didn't sell our animals, thinking that we might return. We took one of our cows, slaughtered it, and brought it to Istanbul with us because we were afraid, we might starve in an unfamiliar place. (Mustafa Işıkbaş, 19 August 2005)

Furthermore, he explained that people did not want to migrate, but they had no other choice and wanted to distance themselves from the trauma and the aura of the place created by the earthquake, even if temporarily. Although he thought of migration to be temporary, he could not fully realize this desire. His wife, Perihan completed their migration story as follows:

We trusted our relative Hüseyin Aşan, who had gone to Istanbul in the 1940s, and went to live in Çeliktepe in Istanbul. My parents had gone to Gültepe in Istanbul before us and had rented a house. Since we stayed in a tent provided by Kızılay in Çeliktepe, people called us “gypsies.” We were the only family staying in tents in the middle of Istanbul. We had no shoes. Our clothes were old and worn out. Perhaps it was because of our miserable state that they called us “gypsies.” My parents explained our situation to the landlords.

They said, “We found a house, but our daughter and son-in-law are still staying in a tent.” My parents’ landlord, Mr. İbrahim, who was an Alevi from Erzincan, came to visit us and got a temporary house for us in Fener from the state. That’s how we got out of the tents. (Perihan Işıkbaş, 19 August 2005)

Mustafa Işıkbaş mentions that İbrahim, being both an Alevi and someone who had experienced the 1939 Erzincan earthquake, empathized with them and helped them considerably:

Through Mr. İbrahim’s efforts, the government gave us a job at the Paşabahçe glass factory. After work, we went back to our tents in Çeliktepe, but my wife, children, and the tents were gone. I was terrified. I asked the children playing around what had happened to the tents. The government officials who had taken down the tents had told the children: “Tell the tent owners to come to Fener when they return from work.” So, I went and, after asking around, found my wife and children. The state placed us in an empty Greek house. Several families, like ours, who were also victims of the earthquake, shared the same house. (Mustafa Işıkbaş, 19 August 2005)

He explains that İbrahim gave constant help and that he made every effort to find a job near their new home:

We, 20 earthquake survivors, went to the Istanbul governor to ask for jobs nearby. At first, the governor scolded us. Later, we found Kemal Bey, who was a CHP member, who treated us like a father. Kemal Bey said in a meeting that we wanted to make a living through our own labour, and because of that, we were given jobs at the local electricity office near our neighbourhood. (Mustafa Işıkbaş, 19 August 2005)

These narratives not only depict the migration process but also highlight the significance of fictive kinship in migration. As illustrated by Kemal Bey, who appeared to be an Alevi, such kinship networks provide crucial social support and facilitate migration. The importance of these networks has, in fact, grown with the rise of mass migration (Gedik, 2011).

Later, Mustafa Işıkbaş learned that the government was going to build houses for earthquake victims in Varto. Due to the difficulties of adjusting to Istanbul, his desire to return to their village began to outweigh his desire to stay. In 1967, they returned to their village. Mustafa Işıkbaş became the village head and held this position for about four years. He believed that education was the best way to escape poverty, and they returned to Istanbul for their childrens’ education.

In 1971, we decided to return to Istanbul. To leave nothing behind, I sold my animals and my ox-driven cart and bought a house in Gültepe with that money. In 1984, I sold the house and the land in the village to my nephew, who was living in Germany. With that money, I bought a house in Gazi Mahallesi. (Mustafa Işıkbaş, 19 August 2005)

The narratives of migration illustrate how individuals focused on survival and rebuilding their lives in the wake of the earthquake. For those who moved to Istanbul, this process was not merely about relocation, but also about establishing connections within social support networks and reconnecting with their roots.; and also contributed to the transnational migration patterns. In the following section, I will explore how the 1966 earthquake influenced transnational migration and how these movements connect deeply to the ongoing social and economic changes in both the home and host countries.

### 4.3 The 1966 earthquake and transnational migration

Just a few years before the 1966 earthquake, Türkiye had signed a labour agreement with Germany on 30 October 1961.<sup>7</sup> Using this agreement as leverage, the Turkish Employment Agency allocated about 15% of the labour requests from Germany to regions of natural disasters, which also had weak socio-economic structures. The goal was to strengthen the economic situation in disaster areas and reduce unemployment. Applications from earthquake survivors who wanted to work abroad were prioritized, as if they had applied two years earlier (Arslan, 2012). While fewer than a thousand people from Varto had gone abroad for work before the earthquake, after the disaster, this number reached tens of thousands. Şükrü Arslan, expressed the following:

Though it was rare, some people from Varto had gone to Germany as workers since 1961. For example, my cousin Hüseyin came to Germany in 1961, and he tried to persuade me to come, but I didn't want to. However, after the earthquake, I had no choice but to go to Germany. We lost thousands of lives in the earthquake, and there was severe damage. Because of this, we were prioritized. On October 19, 1966, we left Varto. To help us earthquake victims, German doctors came to Muş with the head of the Turkish Employment Agency in Ankara and examined us there. They said we were poor, had suffered greatly from the earthquake, and that we should not incur additional expenses travelling to Istanbul. After being examined in Muş, they sent us to Istanbul. In Istanbul, they gave us the addresses of the companies in Germany where we would work. In the evening, they sent us to Munich by train from Sirkeci station with a translator. (Şükrü Arslan, 17 March 2007)

The sizeable portion of the labour requests from Germany coming from disaster victims was seen as an important opportunity for the social and economic development of Varto and as a solution to unemployment.

Between 1961 and 1973, more than 90% of those who migrated from Varto to Germany were Alevi. This can be explained by the fact that Alevi heterodoxy can be described as more liberal compared to Sunni orthodoxy. This can be due to several factors, including Alevi being more open to change and adaptation as well as Alevis' emphasis on spiritual flexibility, making them more open to new environments and cultural integration (Gedik, 2019; 2018). Unlike some more rigid orthodox frameworks, Alevism's adaptability might have helped individuals and communities navigate the challenges of migration. Secondly, the role of community support networks could have played into the Alevi mobility in Varto, as Alevis valued on collective decision-making and mutual support within their communities. This communal spirit made it easier for Alevi migrants to build strong social networks in new locations domestically and internationally. Third, the pluralistic and inclusive nature of Alevism fostered a mindset, which was more accepting of cultural and religious diversity, helping them adjust to different social and cultural contexts in places like Germany and other parts of Europe. Last, given their historical marginalization in Sunni-majority regions, Alevis may have viewed migration as an opportunity to seek better social and economic conditions while avoiding discrimination. Their resilience and history of adapting to



challenging circumstances prepared them for the uncertainties of migration and have them rely on community ties in transnational context (Gedik, Birkalan-Gedik&Madera, 2020).

Considering these different attitudes, the humorous comments of one my Sunni informants, who had a shop in Varto-centre, are as follows:

Working for the “infidel” and taking their money was considered *haram* by us, the Sunnis. This is why we did not want to migrate to Germany. But when our Alevi fellows working in Germany brought money to Varto, we would sell things to them, and that money coming from Germany, was not considered *haram*. (Y.D. 4 August 2004)

However, since both Alevi and Sunni communities came from the same tribal culture and system, the attitudes of migrant workers toward their families and the changes in the family were similar. All those who were the first to migrate and work as labourers from Varto were men. Women and children joined them much later, through family reunification in Germany.

Vartoers not only moved to other countries but also entered a completely different world and time, that of industry. These villagers, skilled tillers on earth and expert shepherds, and who had never been to a big city in Türkiye, found themselves as industrial workers in Germany, working on conveyor belts or in the coal mines. This is because, before the earthquake Varto had a subsistence economy: the villagers only produced for their own needs. The land owned by farmers was continuously divided among growing family members, meaning that production could only meet the basic needs of the farmer’s family. In Germany, they encountered a set of new terms: industrial culture and time, punctuality, work discipline, shifts, and assembly lines—many innovations they had to learn and live with. Besides these, there was a different language, a different religion, and a different social life. For the earthquake-survivor migrant workers from Varto, adjusting to all of these would naturally take years. These workers had first encountered automobiles during the 1946 earthquake, and despite this, many of them began to work in the automotive industry and started making cars in factories in Germany. They lived with the trauma of the earthquake, homesickness, their new work life, and being expatriates all at once (Gedik, 2008).

### **5. Remembering Varto Earthquakes**

Geologists or seismologists offering us numbers on earthquakes and provide information about the formation processes and causes of the earthquakes. However, few of these sources address the events that follow earthquakes, what I called “social aftershocks.” As I alluded earlier, narratives about earthquakes, such as testimonies and personal experience stories contain important insights about disasters.

Dursun Duyan, who experienced both the 1946 and 1966 earthquakes and went to Germany as a guest worker, recalled the earthquakes:

In the 1946 earthquake, our village had 46 households, and 96 people died. People were killed by earth and stones because the roofs were made of earth and the walls were made of stone, which were up to a metre thick. Also, the earthquake happened early in the morning while everyone was sleeping. The entire village was lying outside. There were no tents either. The government couldn’t provide much help because our country was

poor at that time, and there were no resources. In the 1966 earthquake, 18 people died in our village. These were mostly women and children because it was harvesting season. The men were working in the fields, so only women and children were at home, and the majority of the casualties were women and children. (Dursun Duyan, 10 August 2004)

Duyan also recalls how they “met technology” after the 1946 earthquake and how nervous they were:

In the 1946 earthquake, we saw a car for the first time, and we were terrified. Everyone thought that we were living the apocalypse. It was not like anything we had ever known. We hid ourselves in fear. Then we learned from our village head, Mahmut Sarıkaş, that the car belonged to the governor of Muş. In the 1966 earthquake, we saw an airplane and a helicopter for the first time. We experienced the same fear and anxiety because of these strange vehicles flying in the sky. A lot had changed over the years since the 1946 earthquake, and we had learned so much. (Dursun Duyan, 10 August 2004)

There have also narratives telling extraordinary experiences. For instance, in the interviews that I conducted with elderly I heard stories of people who were mistakenly thought to be dead but, tragically, had been buried alive. In another one, which I also heard as a child from my mother, the person is saved. One such story is about a man from Varto who, while serving in the military, learned that an earthquake had struck Varto. With a special permission, he arrived in his village in the evening and wanted to take a shortcut through a cemetery to reach his village, Raqasa. Hearing his footsteps, someone in the grave calls out to him, telling him not to be afraid and asks for his name. The young man calls for people from the nearby houses. They open the grave and look inside, discovering that the woman in the grave is still alive. By taking her out and bringing her home, the woman is saved.

Another story is as follows: A mother who lost both of her sons regularly visits their graves. However, one time, while crying at their graves, she hears them call out, “Mother, save us.” When she insists on telling those around her about what she heard, people think she has suffered a great trauma and try to convince her that it is impossible for the dead to speak. However, they are unable to change her mind, and in the end, they decide to open the graves so that the poor mother might find some comfort by seeing her dead children. However, when they open the graves, they find that the mother was right: the children had torn their shrouds and embraced each other before they died after being buried.<sup>8</sup>

In stories like this, whether true or not, due to the absence of heavy machinery and emergency rescue teams, the earthquake survivors tried to rescue those trapped under the rubble with their own hands. Since the survivors’ pickaxes and shovels were also buried under the rubble, it took a long time to reach the people trapped beneath. The locations of those trapped were shifted due to aftershocks, and rescuers were delayed in reaching them.

Some stories about the earthquake also reflect local beliefs. It is especially believed that certain *yatırs*<sup>9</sup> watch over and protect people. During the 1946 and 1966 earthquakes, people say that three of these tombs (Goşkar Baba, Hazır Baba, and Çadır Baba), located on the summits of the mountains protected them. Some people believed that “the villages



under the skirts of these tombs were not damaged in the earthquake, which is why the nearby villages believe that these tombs protected them” (Kocadağ, 2001: 43).

The severe damage and deep wounds caused by earthquakes in Varto have been reflected particularly in its oral tradition, folk dances, and music. Besides, folk tales and songs describe how the earth “swallowed” people, villages, and animals. These descriptions are important since oral tradition becomes the main source to highlight the experiences of people in the face of limited number of written sources.

## 6. The impact of the 1966 Earthquakes on social structure and networks

Until the 1966 earthquake, social and political organization in Varto was structured around tribes. Earthquake survivors who migrated outside Varto discovered different forms of production and social relationships. Those who went to Germany as labour migrants to work in factories in big cities like Istanbul or graduated from boarding schools<sup>10</sup> were at the forefront of this social change. They began bringing new ideas and practices back to Varto related to everyday life and work, such as individuality, worker rights and unionization, which owe their origin mostly to their experiences in Germany. These concepts, rooted in their industrial experiences, were adapted in Varto as part of a broader movement towards democratic participation and the improvement of daily life in the village, where people sought to apply these principles to enhance both social relations and their well-being.

This social transformation became more evident after 1973, when women in Germany started working after the family reunification.<sup>11</sup> Women’s economic independence also influenced decision-making and sharing of responsibility within the family. For example, in the 1970s, Turkish migrants in Germany who returned to Varto for their summer vacations would often drive their own cars to minimize travel costs and carry more belongings. Travelling the approximately 7,000–8,000 km between Germany and Varto required multiple drivers to take turns for safety and comfort. Consequently, women in Germany obtained driver’s licenses to commute to work, shop, and share driving duties. At a time when the number of cars in Türkiye had not surpassed half a million, it was both fascinating and emblematic of change to see women of migrant families driving cars in Varto during the summers.

Hüsnüye Ülkü, a woman active in the Varto *hemşehri* association in Ümraniye, Istanbul reflected on key turning points in her life, namely on the interaction between the earthquake and education, and her journey out of Varto:

In 1970, just as after the 1966 earthquake, I was sent to a boarding school in Siirt-Kozluk. Later, they sent me to Trabzon Teacher Training School. However, due to the left-right political conflicts, I left the school and returned to my village, Mışko. Since I had no work in the village, I eloped with the person I loved at the age of 16 and got married. After my husband finished high school, my father-in-law sent us to Istanbul in 1985 to stay with a friend of his. My father-in-law had previously built a *gecekondu* (squatter house) near his friend’s place in Istanbul, which he gave to us. His friend also helped us with finding work. And so, we’ve been here for 20 years. (Hüsnüye Ülkü, 28 January 2007).

Hüsniye Ülkü's story reflects the complex dynamics of internal migration and education processes following the 1966 earthquake. Her journey begins with her family sending her to boarding-school, showcasing how disasters could prompt educational opportunities for some. However, her decision to leave school amid political conflicts illustrates how external factors can disrupt young people's education. Her choice to marry when young reflects societal norms and familial pressures shaping life choices, especially for women. On the other hand, her migration to Istanbul, facilitated by her father-in-law's social connections, highlights the critical role of support networks in navigating urban life. The *gecekodu*, a squatter house, provided shelter, and her father-in-law's friend assisted in securing employment, showing the importance of social capital in overcoming the challenges of migration.

Similarly, Ali Rıza Özkan provides another vivid account of the impact of the 1966 earthquake on education and migration:

After the 1966 earthquake, I was sent to school in Adana. I was very young, and I didn't know any language other than Zazaki. I missed my family and village terribly. I cried a lot because I couldn't understand anyone, and they couldn't understand me either. Later, I got used to school, learned Turkish, and school broadened our horizons immensely. After finishing school, I relied on my fellow villagers and went to Eyüp-Silahtar in Istanbul, where Varto locals had a kahvehane near the stone quarry. The café owners helped us by providing a place to sleep and helping us find jobs. Three or four of us stayed together in a dark, damp bachelor's room. The government had provided jobs to earthquake survivors from Varto at the Tekel factory in Cibali. My fellow villagers gave us information about the city and explained how urban life worked. Of course, back then, there were more job opportunities than today, but having connections was essential. After working in agriculture and livestock, suddenly becoming an industrial or textile worker was a big adjustment. This new work was very challenging for us. Today's generation is much luckier. Most are educated, have professions, and know more about the places they are moving to. (Ali Rıza Özkan, 28 January 2007)

Ali Rıza Özkan's story vividly illustrates the trauma, migration, education, and transition to working life in the aftermath of the 1966 earthquake. Sent to Adana, Özkan initially faced language barriers and homesickness, a common challenge for rural children adapting to boarding schools. His account highlights the critical role of hometown networks in facilitating urban adaptation, offering practical support in employment and housing. The transition from agricultural livelihoods to industrial and textile work underscores the difficulty of adjusting to new economic realities, reflecting broader patterns of rural-to-urban migration in Turkey.

While Özkan's experience was shaped by natural disasters and economic necessity, it also parallels contemporary migration challenges. Issues such as language barriers, cultural differences, difficulties in finding work, and efforts to adapt to a new life remain relevant across time. Furthermore, Hüsniye Ülkü's and Ali Rıza Özkan's narratives illustrate the significant impact of the 1966 earthquake on migration, education, and social dynamics. Their stories underscore the importance of support networks, the resilience of rural communities, and the transformative role of education. They also provide valuable insights into the economic and social transitions triggered by rural-to-urban migration in Turkey. Following the earthquake,

many children from Varto were sent to boarding schools across Anatolia. Some later returned to Varto as government officials, contributing to the region's development.

### **6.1. The effects of the earthquake on family structures and marriage patterns**

During the 1946 earthquake, the state identified household (extended family) heads through village chiefs and provided economic aid based on the number of households rather than their size. However, no housing was constructed for earthquake victims; only monetary assistance was provided. As a result, the 1946 earthquake did not lead to any changes in family structures. However, the 1966 earthquake changed the traditional extended family structure dramatically, as some family members perished, and others migrated. Before the 1966 earthquake, tribal-family relations were predominant, but after this date, family-state relations became more significant. The devastation caused by the earthquake led to reliance on state support more. As families faced losses and dislocation, the state stepped in to provide housing, financial aid, and social services, which strengthened the bond between families and the government. This shift was necessary for survival and adaptation in the aftermath of such a large-scale disaster.

Drawing on their experiences from the 1946 earthquake, during the 1966 earthquake, all married young couples and widowed women in Varto registered themselves as household heads for the first time. To maximize the benefits of earthquake aid and planned housing, large families were divided into multiple smaller households. After the 1966 earthquake, the traditional extended families living under one roof disappeared, giving way to neighbouring nuclear families who were still relatives. Shortly afterwards, nuclear families divided the shared property of the extended family among themselves. Thus, the 1966 earthquake not only introduced the nuclear family model but also fostered economically independent family units, permanently and irreversibly transforming the traditional household structure in Varto.

The 1966 Varto earthquake not only altered the traditional household structure but also led to a shift in marriage patterns, from endogamy to exogamy. People I interviewed in Varto, Istanbul, Mersin and several locations in Germany mentioned that before the 1966 earthquake, marriages often involved close relatives from the same village, primarily to avoid paying a bride price.<sup>12</sup> In addition, the paternal cousin marriage was favoured due to the inheritance rights. My interview partners, however, noted that after migration to Germany and the resulting improvement in the family's economic situation, marriages began to involve families of slightly higher social and economic status who were not relatives. As both a sociologist and an academic with a background of migration, I have personally observed this transformation as well. Migration provided the Vartoers with an opportunity to marry individuals from outside their kinship and social circles, and even individuals from even more distant places and from different religions and ethnicities.

## 7. The impact of earthquakes on education

Until the 1950s, the literacy rate in Varto was very low. Türkiye, aspiring to become a modern country, launched an education mobilization through different nation-wide initiatives, which became important in the face of rural/urban division in the 1930s, which added up to about 80% of Türkiye's population. Yet, the literacy rate among them was only around 7%. In Eastern Anatolia, this figure was even lower-around 3% (DİE, 1995)-and this 3% certainly did not include women. One of the reasons for the higher literacy rate among men compared to women in Turkey's past was the mandatory nature of military service. Many men learned to read and write through *Ali Okulları* (Ali Schools), (1959-1975), which became a prime opportunity for soldiers performing their military service, speaking to the male population. The female population could not benefit from it, as women's lack of access to education in Türkiye was determined by strong gender roles. Girls were assumed to perform household chores at an early age, which was thought to prepare them for marriage and childcare, while boys were perceived as the productive force of society and encouraged to pursue education. Consequently, women's right to education was restricted for a long time. This was also partly true for Varto, where the Alevi community warmly welcomed education initiatives, recognizing the potential that literacy and formal education could create in everyday life.

In later years, education led to the emergence of the first teachers and civil servants from Varto. For the first time outside the district centre, a school was opened in the village of Raqasa. The first educated person from Raqasa, M. Zeki Bingöl, who also taught in Muş, encouraged his fellow villagers to pursue education (Avni Gedik, 27 October 2007).

In 1945, with M. Zeki Bingöl and the village head Mahmut Sarıkaş, villagers worked together to build a school, the first one in the village history. The villagers shared this joyous news with those doing their military service through letters. Mustafa Işıkbaş, one of the first literate villagers, describes how he acquired literacy skills:

In our time, there weren't schools even in many districts. One day, I found an empty cigarette packet. I opened and flattened it, intending to use it as a notebook because paper was a very rare thing. I was eager to learn how to read and write. In our village, there was Rıza, the son of Köse Hasan, who had learned to read and write during his military service. I took the paper from the cigarette packet, went to Rıza, and asked him to teach me the alphabet. Rıza taught me a few letters. In 1944, I performed my military service. They were looking for candidates to become sergeants, and even those who knew a little of the alphabet were preferred. Because of my neat handwriting, instead of making me a sergeant, they assigned me as a clerk. Before that, they sent me to a short reading and writing course to improve my literacy. While I was in the military, I received my first letter from Hasan Işık. Hasan had also learned to read and write during his military service and had become a corporal. Hasan wrote that "with collective effort, a two-classroom school was built in the village. Students from neighboring villages and even distant villages were staying with their acquaintances in Raqasa to continue their education." Unfortunately, this school was destroyed in the 1946 earthquake. The village head converted a large house into a school. Later, in 1948, the state built a school for us for the first time. Sadly, this school was also destroyed in

the 1966 earthquake, and students had to be sent to boarding schools outside Varto to continue their education. (Mustafa Işıkbaş, 19 August 2005)

These words not only describe the state of education in the aftermath of the earthquake in Varto but also offer a poignant glimpse into the broader struggles and resilience of rural communities in Türkiye.

The 1966 Varto earthquake had significantly greater social consequences compared to the 1946 earthquake. In 1946, no children were sent outside Varto for schooling. Avni Gedik, who experienced both earthquakes and later migrated to Germany, describes the drastic changes in children's education brought about by the 1966 earthquake:

After the 1966 earthquake, government officials, accompanied by gendarmes and village headmen, went from village to village, gathering children who were working in the fields, playing in village squares, or tending lambs by the roadside. They rounded them up into trucks, often without informing parents. The children were terrified and panicked, not understanding why they were being taken. This is how my two sons were taken away. Months later, we received letters from their teachers on behalf of our children, informing us of their whereabouts and well-being. We visited our children in boarding schools. In 1946, there were no roads or transportation in the region. But by 1966, roads had been built and improved for emergency relief efforts, making transportation much easier. For the first time, the government offered families the option of relocating to warmer parts of Western Anatolia. Thanks to this, we established networks beyond Varto through our children and migrating neighbors. (Avni Gedik, 27 October 2007)

Avni Gedik's son, Cemal, who was among the first students sent to boarding schools in Western Anatolia, calls the 1966 earthquake the "1966 Varto Revolution." He explains:

Most of the first students to attend boarding schools became teachers. At the time, the country desperately needed teachers, and teaching was one of the few professions we knew. Our generation is predominantly made up of teachers. At higher education institutions, we were exposed to modern ideas, prompting us to question our lives and the state of our homeland. This is why our generation spearheaded the transformation of traditional gender roles in Varto during the 1970s. (Cemal Gedik, 17 May 2006)

The destruction of schools in Varto after the earthquake rendered education locally inaccessible. Sending children to free state-boarding schools was an urgent solution, particularly for the earthquake victims. In subsequent years, schools were built in many villages of Varto, enabling the next generation to attend primary school locally. However, by the late 1980s, some villages still lacked schools, and their children continued to attend regional boarding schools.

Ali Asker Işık, a teacher, recalls the painful moments as follows:

Imagine being a small child. Your mother holds your hand and takes you to the truck you're supposed to board, but you don't want to leave. A huge crowd of women and children had gathered around the truck, all crying together. It was heartbreaking, like the bleating of lambs separated from their mothers. We were heading into the unknown... At the time, it was incredibly hard for us. But looking back now, I'm glad we went; otherwise, we would never have had the chance to get an education. (Ali Asker Işık, 31 July 2005)

Berna Gündüz, a nurse living in Istanbul, reflects on how the earthquake gave her an opportunity she otherwise would not have had otherwise:

The earthquake created a chance for me to receive education. Otherwise, even if my father had wanted to, he couldn't have sent me to school. There was no school in our village, nor did my father have the means to send me far away. At that time, boys were prioritized for education. But when the state mandated that all children attend school, parents couldn't object much. I went to a health college and became a nurse. (Berna Gündüz, 3 March 2007)

Education, seen by many earthquake-affected youth as a "saving" tool (emancipatory), was less often perceived as "liberating." Those who returned to their villages found few options to exercise their education's full potential. Engin Aras, who was 12 years old during the earthquake, recalls the newfound focus on education among the villagers:

The earthquake gave us an opportunity to study, and everyone tried to make the most of it. For poor people like us, education was the only salvation. Many families who lost children in the earthquake were reluctant to part with their surviving ones, even for education. But I continued my schooling in Hatay-Reyhanlı and later graduated from Diyarbakır Teachers' School. (Engin Aras, 3 June 2007)

Aras, an idealistic teacher, voluntarily went to Hakkari, a region with a high need for educators. Reflecting on the earthquake's impact, he further notes:

The earthquake brought about positive changes for Varto. It was perhaps the greatest favour God could have done for the people of Varto. No revolution could have changed Varto and its people as much as the 1966 earthquake did. Even those opposed to schooling sent their children to school because of it. (Engin Aras, 3 June 2007)

The earthquake also transformed Varto's trade culture. Mahmut Gedik recounts how it ended traditional caravan journeys:

For centuries, Varto residents crossed the Bingöl Mountains to Erzurum with caravans to meet their needs. These journeys were arduous and adventurous, lasting several days. Even in my childhood, this tradition persisted. But the 1966 earthquake brought it to an end-not just the journeys, but also the stories and adventures tied to them. (Mahmut Gedik, 5 May 2006)

In summary, the 1966 earthquake was a pivotal moment for Varto, transforming its educational opportunities, social norms, and trade practices. Education became a pathway to socio-economic advancement, fundamentally reshaping the community's trajectory.

## **8. The impact of the earthquake on architecture**

Prior to the 1966 earthquake, Varto was home to traditional architecture constructed from local materials that were well-suited to the climate. Houses built with stone, wood, and mud had long been a key part of the region's cultural and social identity. However, they were not of good quality that would endure earthquakes with higher magnitude. With the 1966 Varto earthquake, almost all of the homes and buildings in Varto were either completely destroyed or severely damaged to the point of being beyond repair.



The aid and migration following the earthquake led to an increase in architectural diversity in Varto. Various aid organizations from both within Turkey and abroad built homes according to their own architectural principles. This resulted in a shift away from traditional architecture and the widespread adoption of modern, standardized buildings in the area.

The fact that earthquake and migration to Germany took place almost simultaneously, the migrants brought architectural examples inspired by different countries, which began to appear in Varto, leading to both a transformation of local architecture and a visible manifestation of globalization's effects at the local level.

Also important was the relief efforts after the earthquake regarding homes, which led to conflicts over resources, as some individuals without entitlement sought to gain these houses. Even today, there are people living in temporary earthquake housing in several parts of Varto . and some families are still on the waiting list for getting the houses they deserve after the earthquake. se names were mentioned for housing allocation are still waiting. On the distribution of earthquake houses,<sup>13</sup> Rıza Tolay, the village head of Raqasa at that time states:

I wanted to secure enough aid for my villagers. Despite my efforts, the aid I received did not satisfy anyone. After the earthquake, aid (technical equipment, food, clothing, and money) was sent to Varto from many countries. Heavy machinery, transport vehicles (such as snowmobiles), and medical equipment were donated to the military. Other portable housing materials and sturdy tents were given to the Turkish Red Crescent. However, the Red Crescent sent tents to Varto that were unsuitable for our geographical conditions and impractical. Other materials and funds were shared among other state institutions. The government used this money to build tourist facilities in coastal cities like Antalya. If the aid sent specifically for the people of Varto had been used for Varto, several new Varto towns could have been built. Although the aid was intended for us, only a fraction of it reached us. To this day, no one from Varto knows exactly how much aid came from foreign countries. Instead of distributing the foreign aid to us, they wanted to send us to Germany, and we are still here. (Rıza Tolay, 3 May 2003)

## Conclusion

Using frameworks provided by sociology of disasters and sociology of migration, this article focused on the impacts of the earthquakes in the example of Varto. Reflecting upon my earlier fieldwork and research findings, I have sought to connect issues of migration and social change in the face of the recent catastrophic earthquakes in Türkiye. What I present here is certainly only a small segment of years-long research, which originally included more lengthy narratives on both earthquakes and migration and cannot be discussed here at length due to space issue.

Beyond individual migration stories, the broader social dynamics deserve exploration. The 1966 Varto earthquake triggered a “social aftershock,” reshaping collective identities and community bonds. Both internal migration within Türkiye and transnational migration to Germany created new kinship networks and cultural associations (*hemşehri*), crucial for adaptation and resilience in unfamiliar environments.

Simultaneously, the transnational migration to Germany, facilitated by Türkiye's guest-worker agreements, introduced a new dimension to Varto's social fabric. The experience of migration extended beyond economic necessity, shaping identities and transforming family dynamics. The resilience and adaptability of these migrant communities were tested in unfamiliar cultural contexts, fostering new social norms that reverberated back home. For instance, women's participation in the labour market and the exposure to different social structures in Germany significantly altered gender roles and family structures in Varto.

This migration, induced by disaster, underscores the intricate relationship between sociological resilience and environmental vulnerability. The sociology of disasters teaches us that such events are not merely natural occurrences but deeply human experiences, intertwining with existing socio-political and economic structures. The Varto earthquake exemplifies how disasters can accelerate pre-existing trends, such as rural-to-urban migration and socio-economic diversification, while simultaneously revealing the inadequacies of state responses and infrastructure. These lessons remain pertinent today, as communities continue to grapple with displacement and resilience in the face of environmental catastrophes.

By framing Varto earthquakes' impact within broader migration dynamics, I recognize that disaster-induced displacement may not just a crisis but also an opportunity for societal transformation, nonetheless, one which has its consequences. Understanding these historical patterns can inform more holistic disaster preparedness and response strategies, emphasizing both physical reconstruction and social recovery. In this light, the legacy of the 1966 Varto earthquake transcends mere historical memory, offering crucial insights for navigating the complex interplay between disasters and human mobility in the present and future.

Last, this article underlines, much of our social science knowledge about earthquakes comes from reports primarily authored by geologists, seismologists, and geographers. Altogether, social scientists, anthropologists, and experts from other fields also have invaluable insights to offer, particularly when it comes to understanding the human cost of these disasters. To live more responsibly within the more-than-human world, we must embrace transdisciplinary collaborations not only in the aftermath of disasters but also in initiative-taking, planning, and preparation. This approach would ensure that responses to future catastrophes are more holistic, addressing both physical infrastructure and the complex social processes that shape recovery.



## Endnotes

- 1 Translated by Hande Birkalan-Gedik.
- 2 Since my childhood, I was already quite familiar with the process of our migration to Germany through family narratives. However, as I delved into to the subject in a more scholarly fashion, I was able to gain a more detailed understanding of the reasons for living in Germany as the child of a family who were, in a way, forced to migrate because of the earthquake. Varto earthquakes and migration not only became the key factors shaping my life but also they determined my academic trajectory, leading to sociology of disasters to become one of primary research area.
- 3 As I have noted elsewhere, migration from Varto began as individual internal migration during the 1940s and later expanded to include the first significant waves of migration to Germany as well as to major cities in Turkey. Most notably, many individuals moved to Germany as guest workers, since migration was perceived as a means to address the social, psychological, and economic challenges caused by the earthquake. In this context, the initial migration from Varto was not solely a matter of personal choice but rather a form of “social engineering.” This process unfolded in two stages: first, the earthquake triggered the initial wave of migration; and second, subsequent migrations were driven by social networks, as people began to migrate to rebuild and reestablish their communities (Gedik, 2011: 162).
- 4 In fact, besides earthquakes, other forms of disasters such as climate warming, floods, hurricanes, and tsunamis can also trigger migration (Schmidt 2024). Some recent examples of disaster-induced migration include the flood-related migration from Bangladesh to India (Duque 2024). Ingham, Islam & Hicks (2019), whose findings in Bangladesh include the criticality of social networks and gender roles mobilities. The hindering of mobilities is also a fact, as the 2010 Haitian earthquake illustrates. Joos, Munro and Ribó, note that (2023), after the Haitian earthquake, where some 300.000 people died, the US military made “sure that there was no mass migration from Haiti to the United States” (2023, 2).
- 5 The term *Almancı*, which can be translated to English as *Deutschler*, refers to Turkish migrants in Germany. The term often carries mixed connotations of both admiration and criticism and involves a paradox: while migrants may gain prestige in their homeland, they face exclusion in German society. The term initially used for those working in Germany but broadly applied to other European destinations (for further discussion, see Gedik 2011; 2008).
- 6 A close companion or confidant.
- 7 Approximately three years after the labour agreement signed with Germany on May 15, 1964, Turkey signed a labour agreement with Austria. On 16 July 1964, Turkey signed its third labour agreement with Belgium. On 19 August 1964, Turkey signed a labour agreement with the Netherlands, followed by agreements with France on 8 April 1965, Sweden on 10 March 1967, and Australia on 5 October 1967. After the labour agreements with European countries and Australia, other agreements were signed with Libya, the Turkish Republic of Northern Cyprus, and Gulf countries.
- 8 I first heard this story from my mother Gewez Gedik. The story was told also by the Hürriyet Newspaper, 21 August 1966, with the headline “The entire country is in mourning. The cries of those buried alive would not cease. It had made headlines with the title ‘Save us!’”
- 9 Saints’ tombs.
- 10 State boarding schools in Türkiye differs greatly from European boarding schools. These schools were typically attended by children from regions without local schools, orphans, or those from economically disadvantaged families.
- 11 Before the first foreigner law was introduced in 1965, family reunification was unrestricted. However, after 1965, only the spouse and children under 18 of a family member living in Germany became eligible for family reunion, if the family member had lived in Germany for at least three years (or one year in the case of guest workers from recruitment countries), was employed, and had an apartment spacious enough to accommodate his family members. Exceptions were allowed under specific conditions. In 1981, family reunification regulations became stricter: children had to be 16 or younger to qualify, and both parents needed to already reside in Germany. While these rules saw little change throughout the 1980s, it should be noted that on 23 November 1973, the Federal Ministry of Labor and Social Affairs (BMAS) under the Willy Brandt government halted the recruitment of foreign workers for the German labour market. This halt in recruitment not only affected the hiring of new so-called guest workers from nearly all recruitment countries but also had consequences for the workers already residing in Germany.
- 12 Bride price (*başlık parası*) differs from dowry among the Kurds and Turks. The former refers to money or valuables that the groom provides to the bride’s family. Its cultural significance lies in affirming the bride’s worth, showing respect for her family, and compensating for the loss of labour, especially in rural communities

where her absence reduces the family's workforce. Dowry (*çeyiz*), on the other hand, is something that the bride brings from her home, usually as material goods and remembrance but also could be money. Dowry is seen as a form of financial security for bride, which supports new household. In contrast, dowry consists of material goods that the bride brings from her father's family. This tradition serves as a form of financial security for the bride and helps support the newly established household.

- 13 Here, I use the term "earthquake houses" (*deprem evleri*) to refer to two types of housing constructed after the earthquake demolitions, based on the declaration of household heads. The first type consists of temporary shelters, often in the form of *baraka* (shacks) or prefabricated houses. The second type, known as *kalıcı konutlar* (permanent housing), are built by companies subcontracted by the state. These housing units were allocated not only to those who had actually lost their homes and required state assistance but also to the married sons who established their own nuclear families after they lost their homes and moved out with their nuclear families from the extended household. In this context, the men were recognized as household heads and women were only considered household heads if they were widowed.

**Research and publication ethics statement:** This article is drawn from the field research conducted for my doctoral dissertation (mostly between 2004-2007) that was published in German in 2008 in Germany. The article uses my further fieldwork research on the topic that took place between 2008 and 2012, which helped to expand and re-frame my findings in the light of contemporary theoretical insights. In its current form, the article has not been published elsewhere and has not been submitted for publication as a journal article or book chapter in any other journal or publisher.

**Authors' contributions:** The article is single-authored.

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## References

- Ambraseys, N.N. (1997). The little-known earthquakes of 1866 and 1916 in Anatolia (Türkiye), *Journal of Seismology* 1(3), 289–299.
- Ambraseys, N.N. & A. Zátópek (1968). The Varto Üstükran (Anatolia) Earthquake of 19 August 1966: A Summary of a Field Report, *Bulletin of the Seismological Society of America*, 58(1): 47–102.
- Assmann, J. (2018). *Das kulturelle Gedächtnis Schrift, Erinnerung und politische Identität in frühen Hochkulturen* (Cultural memory: Writing, remembrance, and political identity in early civilizations) C.H Beck.
- Belasen, A.R. & Polachek, S.W. (2013). Natural disasters and migration. Constant, A. F. & Zimmermann, K. F. (Eds.) In *International Handbook on the Economics of Migration*. Edward Elgar, pp. 309–330.
- Clausen, L. (1985). Offene Fragen der Seuchensoziologie (Open questions in sociology of epidemics), *Österreichische Zeitschrift für Soziologie. Sonderheft Aspekte sozialer Konstitution von Medizin*

(Austrian Journal of Sociology. Special Issue: Aspects of the Social Constitution of Medicine), 10(3/4), 241–249.

- Chumky, T, Basu, K. Onitsuka, K & Satoshi Hoshino (2022). The current research landscape of disaster-induced migration: A systematic review and bibliometric analysis, *International Journal of Disaster Risk Reduction*, 74, 102931. <https://doi.org/10.1016/j.ijdr.2022.102931>.
- Dombrowsky, W.R. (1989). *Katastrophe und Katastrophenschutz*. Deutscher Universitäts-Verlag.
- Dombrowsky, W.R. (1995). Zum Teufel mit dem Bindestrich. Zur Begründung der Katastrophen(-) Soziologie in Deutschland durch Lars Clausen (To Hell with the Hyphen: On the Establishment of Disaster(-) Sociology in Germany by Lars Clausen). In W. R. Dombrowsky & U. Pasero (Eds.) *Wissenschaft, Literatur, Katastrophe*. Westdeutscher Verlag, pp:108–122.
- Dombrowsky, W.R. (1987). Critical Theory in Sociological Disaster Research. In R. R. Dynes, B. de Marchi & C. Pelanda (eds.), *Sociology of Disasters. Contribution of Sociology to Disaster Research*, Franco Angeli, pp: 331–356.
- DİE (Devlet İstatistik Enstitüsü). (1995). *Türkiye nüfusu, 1923-1994: Demografi yapısı ve gelişimi, 21. yüzyıl ortasına kadar projeksiyonlar (Population of Türkiye, 1923-1994: Demographic structure and development, projections until the mid-twenty-first century)* (Publication No. 1839). DİE.
- Duque, M.C. (2024). Climate change in Bangladesh shapes internal migration and movement to India. Accessed at: <https://www.migrationpolicy.org/article/bangladesh-india-climate-migration>. (Online on 4 September 2024; Accessed on 2 October 2024).
- Faist, T. (2020). Annäherungen an eine Soziologie der Migration (Annäherungen an eine Soziologie der Migration). In T. Faist (Ed.). *Soziologie der Migration: Eine systematische Einführung* (Sociology of migration: a systematic introduction) (vol. 2) Walter de Gruyter, pp: 3–35.
- Faist, T. (Ed.). (2020). *Soziologie der Migration: Eine systematische Einführung* (Sociology of migration: a systematic Introduction) (vol. 2). Walter de Gruyter.
- Fuchs, C.W. (1886). *Statistik der Erdbeben von 1865–1885*. Sitzungsberichte der Kaiserlichen Akademie der Wissenschaften. Mathematisch-Naturwissenschaftliche Classe. Abt. 1, Mineralogie, Botanik, Zoologie, Geologie und Paläontologie (Proceedings of the Imperial Academy of Sciences. Mathematical and Natural Sciences Division. Section 1, Mineralogy, Botany, Zoology, Geology, and Palaeontology), 92, 215–625.
- Gedik, E., Birkalan-Gedik, H. & Madera, A. (2020). Alevism in Turkey and in Transnational Space: Negotiated Identities between Religion, Culture and Law. *Stato, Chiese e pluralismo confessionale*.
- Gedik, E. (2019). Varto Alevileri: Etnisite, din ve kültür. E. Çağlayan (Ed.) In *Burası Muş tur’’: Tarih, Toplum, Kültür ve Edebiyat*, Pinar Publishing, pp: 219–248.
- Gedik, E. (2018). Rekonstruktion des Alevitentums im transnationalen Raum zwischen ethnischen und sprachlichen Grenzen: Das Beispiel Varto (Reconstruction of Alevism in transnational space between ethnic and linguistic borders: The example of Varto). *Transmission processes of religious knowledge and ritual practice in Alevism between innovation and reconstruction*, Peter Lang, pp: 247–286.
- Gedik, E. (2011). Migrant organizations in Turkey and Germany: Local, transnational and global contexts of Kurdish-Alevis from Varto, Türkiye. *Urban Anthropology and Studies of Cultural Systems and World Economic Development, Anthropological Studies on Türkiye*, 40(1/2), 151–204. <https://www.jstor.org/stable/41291340>.
- Gedik, E. (2010). Almanya’da öteki olmak öteki kalmak (To be the other, to remain the other in Germany), *folklor/edebiyat* 16(62), 41–68.

- Gedik, E. (2009). Yoksulluğun çeşitlendirilmesi/cinsiyetlendirilmesi: İlişkiler, dayanışma ve stratejiler (Diversification/Gendering of Poverty: Relationships, Solidarity, and Strategies). Paper presented at the IIIrd National Anthropology Congress at the Panel: Toplumsal Cinsiyetin Kesişimleri (Intersections of Gender). Istanbul.
- Gedik, E. (2008). *Sozialer, kultureller, ökonomischer und linguistischer Wandel im Rahmen der transnationalen und der Binnenmigration: Soziale Netze am Beispiel von Varto*. J.W. Goethe Universität. Frankfurt am Main.
- Herring, A. (2013). Sociology of Disaster. In Bobrowsky, P.T. (eds.). *Encyclopedia of Natural Hazards. Encyclopedia of Earth Sciences Series*, [https://doi.org/10.1007/978-1-4020-4399-4\\_326](https://doi.org/10.1007/978-1-4020-4399-4_326). Springer, pp: 926–936.
- Ingham, V, Islam, M. R. & Hicks, J. (2019). Adaptive flood mobilities in Bangladesh, *Mobilities*, 14 (2), 158–172, <https://doi.org/10.1080/17450101.2018.1522882>.
- Joos, V. Munro, M. & Ribó, J. (2023). The Power of the Story Writing Disasters in Haiti and the Circum-Caribbean. In *The Power of the Story Writing Disasters in Haiti and the Circum-Caribbean* (Joos, V. Munro, M. & Ribó, J. eds.), Berghahn, pp: 1–26.
- Kocadağ, B. (2001). Varto ve Yöresinin Yatırları. *Karacaahmet Sultan*, 63, 42–45.
- Kotschy, K. G. T. (1860). *Dr. Theodor Kotschys neue Reise nach Klein-Asien. 3. Abschnitt: Reise von Trapezunt über Erzerum, den Bingöll und Musch nach dem Wan-See Erforschung der unbekanntten Gegenden im Süden dieses Sees und Rückreise nach Erzerum, 27. Juli bis 25. Okt. 1859*. Petermanns Geographische Mitteilungen, pp: 68–77.
- Koçyiğit, A. (2005) 03.12-14 Kızılcıbuk (Karlıova-Bingöl Depremleri. (Mw 5.7-5.8), 2. <http://eerc.ce.metu.edu.tr/pdf/5.pdf>. Accessed on 14 August 2007).
- Muş İl Yıllığı. 1967. Bingöl Printing House.
- Schmidt, K. (2020). Formen und Kategorisierungen von Migration. In T. Faist (Ed.) *Soziologie der Migration: Eine systematische Einführung* (Vol. 2.), Walter de Gruyter. pp: 55–72.
- Taşman, C. E. (1946). Varto ve Van depremleri, *M.T.A. Mecmuası*, 2(36), 287–291.

## Newspapers

- Dünya, August 24, 1966.  
Hürriyet, August 24, 1966.

## Interviews

- Arslan, Ş. (29 January 2012). Mörfelden - Walldorf, Germany.  
Arslan, Ş. (17 March 2007). Mörfelden - Walldorf, Germany.  
Aras, E. (3 June 2007). Gazi Mahallesi - Istanbul, Türkiye.  
Duyan, D. (10 August 2004). Raqasa (İçmeler) - Varto, Türkiye.  
Gedik, A. (27 Oktober 2007). Mainz - Kostheim, Germany.  
Gedik, C. (17 May 2006). Mersin, Türkiye.  
Gedik, M. (5 May 2006). Mersin, Türkiye.

- Gündüz, B. (3 March 2007). Ümraniye - İstanbul, Türkiye.  
Işık, A.E. (31 July 2005). 31 July 2005, Raqasa (İçmeler)Varto, Türkiye  
Işık, M. (3 June 2007). Gazi Mahallesi - İstanbul, Türkiye.  
Işıkbaş, M. (19 August 2005). Raqasa (İçmeler) - Varto, Türkiye.  
Işıkbaş, P. (19 August 2005). Raqasa (İçmeler) - Varto, Türkiye.  
Özkan, A. R. (28 January 2007), Ümraniye - İstanbul, Türkiye.  
Tolay, R. (3 May 2003). Mainz-Kostheim, Germany.  
Ülkü, H. (28 January 2007), Ümraniye - İstanbul, Türkiye.  
Y. D. (4 August 2004). Varto, Türkiye.



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*Araştırma makalesi/Research article*

# **Between Transience and Permanence: Forced Migration Experience of Hatay Residents after the 6 and 20 February 2023 Earthquakes**

Geçicilik ve Kalıcılık Arasında  
6 ve 20 Şubat 2023 Depremleri Sonrasında Hataylıların  
Zorunlu Göç Deneyimi

**Aylin Eraslan\***

## **Abstract**

The 2023 earthquakes, referred as the disaster of the century, caused the deaths of thousands in Türkiye. Some of those who managed to survive the earthquake left their cities in the aftermath. My aim in this article is to make projections about whether people from Hatay who were forced to migrate suddenly after the earthquake are transient or permanent in the provinces where they currently reside. Moreover, I aim to identify whether the conditions could facilitate the return of the migrants back to their homelands. For this purpose, I conducted field research simultaneously in Eskişehir and Ankara between 23 June and 31 July. With regards to Hatay residents now dispersed across various provinces in Turkey, I conducted interviews via telephone. In Eskişehir and Ankara, I conducted participant observation and in-depth

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interviews. I interviewed a total of 20 people, 14 women and 6 men. I tried to learn about their experiences during and after the earthquake, their views on permanence and transience, and their expectations for the future by asking them semi-structured, open-ended questions. The findings reveal that almost all participants expressed a willingness to return if issues such as housing, unemployment, education, healthcare, employment, and transportation were resolved. The uncertain status of the displaced population-whether transient or permanent in their new locations-seems to depend largely on the progress of Hatay's reconstruction process. It is anticipated that prolonged delays in this process will worsen desperation and may turn migration from transient to permanent. Investments made despite economic constraints during the settlement process in the place of migration will make return increasingly difficult over time. Uncertainty about the future leads to feelings of hopelessness, helplessness, loneliness, and a sense of being caught in between, leaving individuals more vulnerable and fragile. It is anticipated that accelerating the city's reconstruction process will significantly reduce the feeling of uncertainty and, by increasing the sense of hope for the future, will reverse migration.

**Keywords:** *earthquake, disaster, migration, Hatay, disaster anthropology*

### Öz

Asrın felaketi olarak nitelendirilen 2023 depremleri, Türkiye'de binlerce kişinin ölümüne neden olmuştur. Deprem sonrasında hayatta kalmayı başarabilenlerin bir kısmı can havliyle kenti terk etmiştir. Bu makalede amacım, deprem sonrasında aniden göç etmek zorunda kalan Hataylıların buldukları illerde geçicimi yoksa kalıcı mı olduklarına ilişkin öngörülerde bulunmaktır. Diğer amacım ise göç edenlerin geri dönüşünü sağlayacak koşulların neler olduğu yönünde ipuçları yakalamaktır. Bu amaç doğrultusunda alan araştırmasını 23 Haziran-31 Temmuz tarihleri arasında eş zamanlı olarak Eskişehir ve Ankara'da yürüttüm. Türkiye'nin birçok iline dağılmış Hataylılarla ise görüşmeleri telefonla gerçekleştirdim. Eskişehir ve Ankara'da katılımcı gözlem ve derinlemesine mülakatlar yaptım. 14 kadın, 6 erkek toplam 20 kişiyle görüştim. Yarı yapılandırılmış ve açık uçlu sorularla bireylerin deprem sırası ve sonrası süreçleri, kalıcılık ve geçicilik durumlarına ilişkin görüşleri, neler hissettikleri ve gelecek beklentilerini anlamaya çalıştım. Araştırma sonuçları, görüşmecilerin neredeyse tamamının barınma, işsizlik, eğitim, sağlık, istihdam, ulaşım vb. alanlardaki sorunların çözülmesi halinde geri dönme eğiliminde olduklarını göstermiştir. Göç ettikleri yerlerde geçici mi yoksa kalıcı mı oldukları belirsiz olan yerel halkın durumunu büyük ölçüde Hatay'ın yeniden inşa sürecinin belirleyeceği öngörülmektedir. Bu sürecin uzaması umutsuzluğu artacağı gibi göçün geçicilikten kalıcılığa dönüşmesine de neden olacaktır. Göç edilen yerde tutunma sürecinde ekonomik kısıtlılıklara rağmen yapılan yatırımlar, zaman geçtikçe geri dönüşü daha da zorlaştıracaktır. Geleceğe dair belirsizlikler umutsuzluk, çaresizlik, yalnızlık ve arada kalmışlık duygusuna sebep olmakta, bu durum ise bireyleri daha da savunmasız ve kırılğan hale getirmektedir. Bireylerde umudun artırılması, belirsizliklerin ortadan kaldırılmasına bağlıdır. Bu noktada kentin yeniden inşa sürecinin hızlandırılması, belirsizlik duygusunu büyük ölçüde azaltacağı gibi geleceğe yönelik umut duygusunu artırarak göçü tersine çevireceği ön görülmektedir.

**Anahtar sözcükler:** *deprem, afet, göç, Hatay, afet antropolojisi*



*You won't find a new country, won't find another shore.  
This city will always pursue you.  
You'll walk the same streets, grow old  
in the same neighborhoods,  
turn gray in these same houses.  
You'll always end up in this city.*

*Constantine P. Cavafy (1863-1933)<sup>1</sup>*

## **Introduction**

A crucial factor in ensuring human survival lies in our ongoing quest to understand how nature operates and adapts to its environment. Central to this adaptation is human flexibility—the ability to respond to environmental challenges in diverse ways by developing effective strategies (Bates, 2013: 113). Thus, humanity's knowledge of ways in which nature functions, how it solves problems, and how it makes decisions are shaped under the pressure of the environment in which it lives. In response to the dynamic nature of the environment, humanity's ability to develop coping strategies, is largely attributed to the cultural frameworks it has established against the environmental problems it encounters. According to Oliver-Smith (2002: 45), environmental problems are the challenges encountered in the process of adapting to natural events.

The adaptation process is affected by the transformation of natural events into “disasters”, which clearly serve as indicators of a society's success or failure in adapting to specific features of its natural and socially constructed environment. Humans are the result of the successful strategies developed by our ancestors thousands of years ago to combat the environmental challenges they faced (Oliver-Smith, 2002: 45). There have been numerous disasters causing mass deaths throughout human history. In the human-nature relationship natural occurrences can turn into disasters if adaptation mechanisms are insufficient or ineffective. At this point, it is crucial to determine if the disaster was caused by external factors (such as human activity) or natural processes. Thus, multidimensional analysis of the internal and external causes of disasters through interdisciplinary studies is of vital importance before producing solutions. Duyar and Çeltikçi's (2024: 206) conceptualization of “social/cultural disaster” contributes to understanding the issue from a sociocultural perspective. Besides the physical and psychological traumas experienced, their approach discusses the socio-cultural rupture and the shocking effect it creates based on the term “social/cultural disaster”. For those who survive the major disasters, it is often not the buildings but the neighborhoods and cities that are destroyed. “People transform space into ‘place’ and place into ‘home’. In a way, ‘home’ is an important ‘place’ where people feel safe and surrender themselves in the adventure of ontological existence” (Eraslan, 2024: 60). The loss of this place creates psychological and sociocultural difficulties. This understanding shows that what happened after the earthquake was also a social/cultural disaster (Duyar & Çeltikçi, 2024: 206). Conditions that arise



during and after disasters affect many areas of life. Disasters can cause large-scale destruction, disruption of social order and changes in people's lives (Yılmaz & Turan, 2023:1249). It creates an environment of chaos and leads to a re-examination of the cultural systems that form the basis of the adaptation patterns of human communities.

Although the acute life-threatening consequences of an seismic event may have been subsided, those who survived continue to experience its socio-economic, psychological, and social repercussions throughout their lives. These and similar issues that emerge over time can be described as "cultural aftershocks" of the earthquake. Such cultural tremors manifest periodically in various ways. Sometimes, the news of the death of acquaintances, sometimes the reality that nothing will ever be the same again, the loss of the city, childhood, youth, in other words, the loss of memories and social networks continue to effect people like aftershocks of earthquakes.

In the framework of survival and adaptation, post-disaster mass migration is considered as forced migration. In fact, they are actually associated with the evacuation of groups or individuals to closer places for a short period of time or individuals fleeing to places they find safe. When people temporarily relocate after a sudden disaster, they are positioned as between permanence and transience. If any of the processes of escape, evacuation, displacement and resettlement, which we characterize as demographic mobility takes place over long time it may turn into forced migration (Oliver-Smith, 2006). In the light of the interviews conducted, I observed that the individuals who had to leave Hatay after the earthquake were caught between permanence and transience. Yet, I also observed that the speed of reconstruction process will change the course of the situation. With the prolongation of the reconstruction process, the tendency of individuals to return will decrease due to investments in their businesses and their children's education. As stated by Oliver-Smith (2006), the likelihood of this situation turning into forced migration will increase because of its involuntary nature. In the following pages, I will discuss the details about the reasons why the relocation that took place after the earthquake is considered within the scope of forced migration.

The 2023 earthquakes had a a great impact on the population and caused significant destruction in the region. After the disaster, many lives were lost. Especially in the Antakya district of Hatay, most of the survivors were forced to leave the city because of the scale of destruction. Antakya was called "ghost city" by the people who chose to stay in the area. As the surviving people in Hatay woke up on the morning of 6 February as "earthquake victims", people from Hatay were provided with free access to services provided by state institutions and municipalities all over Turkey. All state institutions, particularly AFAD and the Red Crescent, as well as numerous municipalities, non governmental organizations in Turkey and people from all over Turkey and internationally, provided clothing, food, shelter, psycho-social support to the earthquake victims in the disaster zone and to those evacuated by the state or migrated on their own (Disaster and Emergency Management Presidency, 2023; AFAD, 2024).

### **Subject and aim**

The focus of this study is to explore the permanent and transient status of people from Hatay who migrated to other provinces of Turkey as a result of the 6 February 2023 Maraş

and 20 February 2023 Hatay earthquakes. The term transience here refers to the return of people to their cities that they had to leave for their lives after the improvement of conditions (education, health, job opportunities, etc.). If the improvement process is takes longer time than expected the transience turns into permanance. The reason behind this process can be explained with the investment made by earthquake survivors for their new life and their children's education in other cities.

In this study, I focus on how individuals managed this process, the emotions they felt, and their thoughts about the future, with the aim of understanding how people with different socio-economic situations, income and education levels, gender, etc. act in the face of sudden earthquakes that lead to large-scale loss of life, property and relocation. In addition, we aim to understand how they cope with this difficult process and whether they have plans returning to Hatay in the future.

### **Methodology**

This study is based on qualitative research methods, particularly, participant observation and in-depth interviews. In the period between June 15 and July 15 2023, I conducted face-to-face interviews in Eskişehir and Ankara and interviews via telephone with individuals from Hatay who migrated to Mersin, İstanbul, Uşak and Antalya. Although Hatay residents migrated to several cities, there were several reasons why Eskişehir and Ankara were chosen. The first is that, after the earthquake, Hatay residents migrated mainly to Adana and Mersin, with Ankara and Eskişehir being the next most common destinations. Another reason is that after the earthquake, I moved to Eskişehir. In addition, due to my family's relocation to Ankara following the earthquake, I frequently traveled to Ankara. I had several interviewees, relatives and acquaintances in these two cities who had experienced the earthquake.

The fact that my family and relatives settled in Ankara after the earthquake had a great influence on the research I conducted in Ankara. In addition to solving my accommodation problem, I also had the chance to understand the recovery process after the earthquake through witnessing the reactions and experiences of my family and relatives, allowing me to see and feel the things deeper. This situation gave me the opportunity for an *experimental observation* in which I went through *shock, pain, loss, grief, sadness, hope* etc. I conducted face-to-face and telephone interviews with my interviewees from my previous field research and with many people from Hatay I had just met. The interviewees consisted of 20 people, 14 women and 6 men. The reason for the higher number of female interviewees compared to male interviewees was that the number of women who migrated with their children or elderly family members (mother, father, mother-in-law and father-in-law) was considerably higher. While men went back to their jobs in Hatay to provide for the family, women often migrated to a safer city for education, psycho-social support, elderly care, and treatment of chronic diseases.

The interviewees mostly migrated from Antakya, Altınözü, İskenderun and other districts of Hatay. 6 of the interviewees were university graduates, 7 were high school graduates and 8 were primary school graduates. The interviewees included individuals who lost their jobs after the earthquake, worked in daily jobs, retired, as well as individuals from different professional groups of the society such as religious officials and teachers who continued their professions

after the earthquake. I completed the in-depth interviews after we reached the saturation level. In other words when the answers given to the questions asked in the interviews repeated themselves I terminated the data collection process. Due to the sensitivity of the subject, it was reminded that the interviews could be terminated in moments of emotional intensity.

Nevertheless, nearly all of the interviewees characterised the interviews as “*therapy*,” “*an opportunity to express their emotions*,” “*beneficial because they wanted a platform to communicate*” their feelings and thoughts. They stated that it was beneficial for them to discuss their earthquake experience with an individual who had also experienced it, helping me to develop a deeper level of rapport with my informants. Since the reactions of individuals to the earthquake differ due to categories of gender, language, religion, ethnicity, income level, livelihood, class, age, etc., I tried to take into account different individual experiences (Duyar & Çeltikçi, 2024: 207; Varol & Gültekin, 2016: 1435). Within the framework of ethical requirements, I coded the names of the interviewees with their initials.

Hatay is known worldwide as the city of civilizations where refugees, migrants and different people from different religions and ethnic backgrounds live. In order to understand the ways in which different demographic groups experienced the effects of the earthquake, I ensured that interviewees were selected from different religious groups. Furthermore, I conducted interviews with Uzbeks and Syrian asylum-seekers who settled in Hatay. My aim was to comprehend how different ethno-religious groups living in Hatay were affected by the earthquake, their emotions and thoughts, their response and the coping strategies they developed. With the same purpose, I preferred to interview women (mothers who have gone through divorce), old and young people, retired people, women who work from home, students, individuals with different income levels.

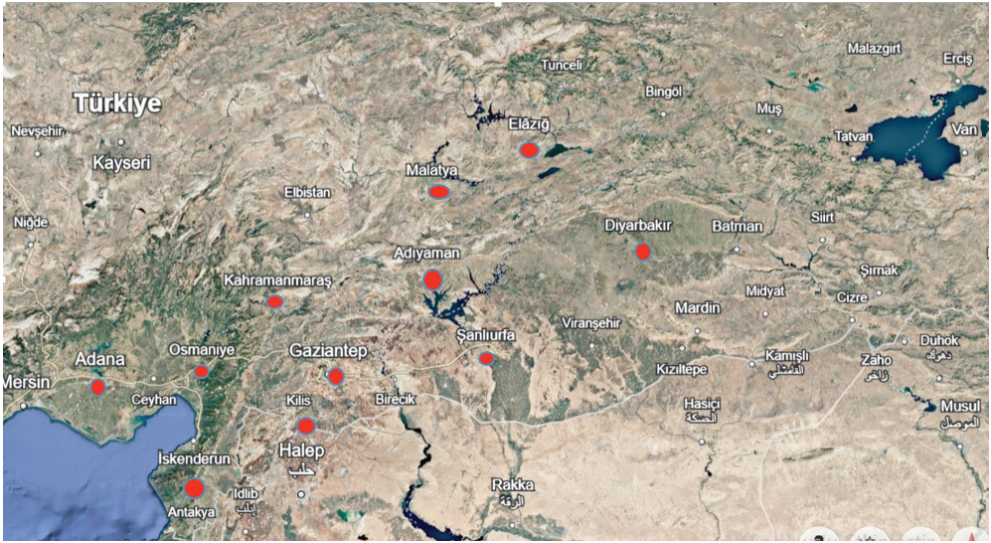
With the help of the semi-structured and open-ended questions, I tried to understand the processes people went through during and after the earthquake, the opinions of the individuals about their permanence and transience, how they felt and their future expectations. The fact that I am from Hatay and that I have experienced the earthquake and migration myself, contributed to a great extent to navigate through the problem of hierarchy between the researcher and the researched. Furthermore, since I had to migrate to Eskişehir like my interviewees, and this made me an “earthquake survivor” the interviews were more interactive and increased the sense of trust as we went through similar phases because of the disaster. In addition, I answered the personal questions directed to me during the interviews. In the interviews, we remembered the moment of the earthquake together, became silent, cried and continued. I observed that the willingness of the interviewees to tell their own stories increased significantly.

## **6 February 2024 Maraş Earthquakes and their effects**

Major earthquakes have occurred in Turkey throughout history due to its geographic and geological location and. On the seismically active Anatolian plate, 20 earthquakes above 7 magnitude have occurred since 1900 causing loss of life and property. 2023 Kahramanmaraş,

1939 Erzincan, and 1999 Gölcük-centred Marmara, 1946 and 1966 Varto Earthquakes were the most severe earthquakes in terms of deaths and extensive damage (Presidency of Strategy and Budget, 2023; Dinç, 2023: 203; Zengin, 2020: 793).

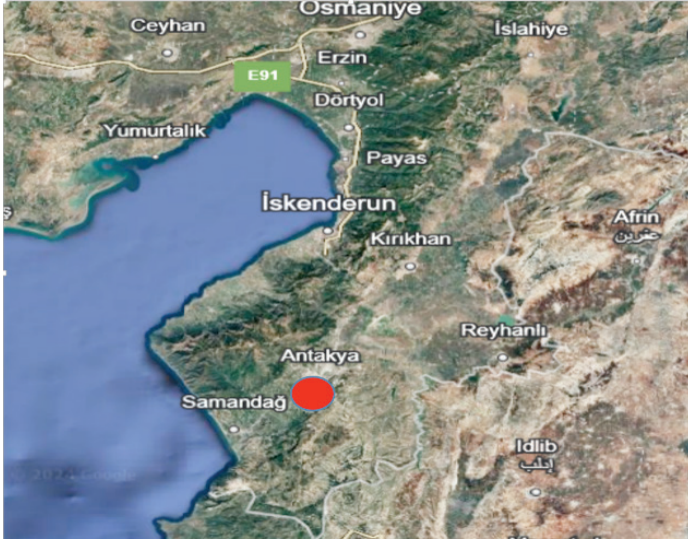
On 6 February 2023 , at 04:17 a.m. and 13:24 p.m., two of the largest earthquakes in the last century, with magnitudes of 7.7 and 7.6 occurred at the epicentres in Pazarcık and Elbistan districts of Kahramanmaraş. Fourteen days later, on 20 February 2023, two more earthquakes of magnitude 6.4 and 5.8 occurred at 20:04, with the epicentre in Yayladağı, Hatay. These earthquakes killed approximately 50,000 people and injured tens of thousands (Mineral Research and Exploration Report, 2023). Eleven provinces were affected by the massive earthquakes, which left Hatay with the most damage (See map 1).



**Map 1:** 6 February 2023 11 provinces affected by the earthquakes in Kahramanmaraş (Hatay, Kahramanmaraş, Osmaniye, Kilis, Elazığ, Adana, Diyarbakır, Şanlıurfa, Gaziantep, Adıyaman, Malatya) (<https://earth.google.com/web>)

Among these provinces, Antakya, the central district of Hatay had the highest number of deaths and “turned into ruins” (Map 2). Places of worship, historical sites and many buildings in the centre of Antakya collapsed and the buildings that remained standing became unusable. Thousands of people perished under the rubbles. A nationwide mourning period was declared due to the heavy loss of life and a state of emergency was put in effect for three months in order to urgently carry out rescue operations in the provinces affected by the earthquake.





**Map 2:** Hatay/Antakya damaged by the 6 and 20 February 2023 Maras and Hatay earthquakes  
( [www.goog https://earth.google.com/web](https://earth.google.com/web))

### **Earthquakes and forced migration**

In terms of displacement, coercive and repulsive factors, migration following a natural disaster can be categorised as forced migration, which often occur in an unplanned and involuntary manner. The term “forced migration” is generally used in the literature for displacement that occurs as a consequence of natural disasters such as wars, civil unrest, political issues, poverty, famine, drought, floods and earthquakes (Peker & Şanlı, 2022: 125).

Disasters can change the course of people’s lives and impact the region where they live. After the disasters individuals may have to leave the city where they reside due to challenges in housing and infrastructure (Gökalp & Turan, 2023: 1256). Migration, whether permanent or temporary, has always been a traditional response or survival strategy of people facing the possibility or consequences of disasters (Oliver-Smith, 2006). Mass migration is often forced by disasters and this is a natural consequence. Throughout history, the world has witnessed hundreds of mass migrations displaced by natural disasters. The Chernobyl nuclear accident, the tsunami in South Asia, Hurricane Katrina are just a few examples. The 2008 Wenchuan earthquake killed approximately 96,000 people and injured 288,000 in China’s Sichuan Province (Huang, 2022: 2). The explosion and radiation leakage at the Chernobyl Nuclear Power Plant in Ukraine in 1986 caused many people to be forced to migrate (Deniz et al., 2017 cited in Gökalp & Turan, 2023: 1257). The 1985 Mexico City earthquake, approximately 9,500 individuals died and population decreased from 8.8 million to 8.2 million (Alscher, 2010: 175 cited in Deniz et al. 2017: 1427).

In Türkiye, the population declined as a result of the 1999 Gölcük earthquake (Peker & Şanlı, 2022: 141). After the 2011 Van earthquake, although the population and the migration

received by the region were the same as the previous year, the rate of earthquake-induced migration increased significantly. The total population decreased from 591,098 people in 2019 to 588,088 people following the earthquake in Elazığ. In the 2020 Izmir earthquake, there was an increase in the population and migration rate (Peker & Şanlı, 2022: 141). Similarly, in Hatay, which was severely damaged after the 6 February 2023 and 20, 2023 earthquakes, thousands of people lost their lives and many people were forced to migrate, meaning that Hatay's population was 1 million 686,043 in 2022, and it dropped to 1 million 544,640 in 2023. Hatay's population decreased by 141,403 people after the earthquake (Turkish Statistical Institute, 2023; Sarıoğlu, 2023: 3).

The above-mentioned disaster-related displacement took place as people wanted to meet their basic needs. In other words, after the initial shock the movement to the nearest settlements with the means offered by the state or by individuals themselves can be considered as evacuation or temporary relocation. The prolonged recovery process of the earthquake region and the socio-economic needs of individuals such as health, education, shelter, job opportunities, psychological support, etc. affects the likelihood of these evacuation or relocation movements becoming permanent over time. These movements of people will be temporary if the basic needs of individuals are met and the sociocultural life in the city is resumed. If these endeavours are prolonged, the likelihood of these migrations becoming permanent will increase day by day as individuals make material and moral investments.

In the initial days of the earthquake, migrations were prompted by fundamental requirements such as shelter, security, hygiene, and nutrition. However, in the subsequent days, they were compelled by external factors such as unemployment, education, health, and psychological support. A significant number of residents of Hatay were compelled to evacuate the city as a result of these challenges. The Kahramanmaraş and Hatay earthquakes had an impact on a vast territory, resulting in significant number of fatalities and mass migration. These earthquakes are among the most destructive earthquakes Turkey has ever experienced.

### **Factors affecting decisions to migrate**

Following the high-magnitude earthquakes on 6 and 20 February, which impacted a vast area, numerous residents of Hatay relocated to various districts in Turkey. In order to understand the nature of this sudden and forced migration, this section focuses on the interviewees' earthquake experiences and how they made the decision to migrate.

T.Y.'s narrative below shows how severe the destructive and shocking impact of the earthquake was and why they had to migrate. Like T.Y., the majority of interviewees compared the experience of the earthquake to "apocalypse".

It was an apocalypse. I was helpless in that moment. I fell into the void. Where were we going to go? There is no home, nowhere to stay. Everything was destroyed. Then AFAD came, soldiers came, they took the bodies out. Everyone was already shouting around, looking for their mothers and fathers. People were climbing on the collapsed buildings and calling out for their mothers and fathers. It all happened in front of our eyes. A

family disappeared just like that. Everyone was waiting to see if they could get them out alive. Unfortunately the building collapsed instantly. They all died instantly. No psychologist, no psychiatrist can erase what we went through. But despite this, you try to survive. After a while, I couldn't bear what I was witnessing. At the end, my daughter screamed and said, "Mom, let's get out of here". Seeing dead bodies everywhere, right next to us. There were bodies two steps away. How can you forget this? My daughter screamed, she said enough is enough, let's go. I wasn't going to leave Antakya. But for my daughter's sake we came to Eskişehir. (T.Y., female, 58 years old, primary school graduate, not working, Eskişehir)

T.Y.'s narrative is particularly similar to the narratives of interviewees residing in Antakya. Many interviewees residing in the city centre stated that they encountered similar situations when they ran on the streets for their lives after surviving the shock of the earthquake. Interviewees who had witnessed the tragic deaths of their neighbors, relatives and close relatives stated that they were traumatized.

As was the case with the 1939 Erzincan and 2004 Aşkale earthquakes, the Kahramanmaraş earthquake on 6 February occurred during the early morning hours. The individuals were awoken in the middle of the night. The fact that the earthquake coincided with a severe winter days, which was rare in Hatay's climate history, made the situation for people more difficult (Gök et al., 2007: 176; Peker & Şanlı 2022: 133). People tried running outside to survive but many of them were killed by falling tiles or water tanks, etc. Those who survived went to relatively safer spaces in fear and panic. Those who had cars spent the night in their cars, while those without built shelters with the materials they found around.

T.Y.'s words are remarkable in terms of reflecting the traumatic effects of the earthquake. It seems that they had to migrate due to the psychological effects of being homeless, not being able to respond to calls for help, witnessing the deaths of their neighbors and relatives.

Our life, childhood, youth, everything was destroyed. First of all, our homeland was destroyed. Most people left for their children. Out of necessity. There were people around that we couldn't save. Our loved ones died, our relatives and neighbors were bleeding in front of your eyes. We were frightened by the earthquake. But we live that earthquake every moment, every second, every minute, with the death of our friends around us, the screams of the people and babies we heard that day. Even if we try to sleep at night, we cannot sleep. But we will return to our hometown no matter what. (C.D., female, 45 years old, not working, high school graduate, Mersin)

In C.D.'s narrative, we can understand that addition to being homeless, she had to leave the city due to her child's education. Similarly, C.D. experienced the psychological pressure of not being able to respond to cries for help. It can be seen that almost all of the interviewees who managed to survive under the rubble, have psychological issues arising from the helplessness they experienced upon the requests for help from people under the rubble.

My father came out of the rubble. He's been having nightmares ever since. If there's a small shake, he immediately asks if it's an earthquake. Many people died. Some of them were buried in Syria after we pulled them out of the rubble. Many people left. One of our neighbors lost his whole family. He was the only one who survived. He



said “what should I do here now?” He said he came there for his children. He said he had nothing left and returned to Syria. (F.Ş., female 25 years old, university graduate, providing educational support to foreign students, Uşak)

F.Ş. stated that her father, who came out of the rubble, could not get over the fear of the earthquake. As a result, they decided to move to Uşak, which they thought was safer in terms of earthquakes. This is also because their daughter was going to university in this city. Their daughter was studying at university. Another interviewee, H.K., described the difficulties experienced by the people who lost everything after the earthquake and the migration strategy they adopted in this direction.

After the earthquake was over, my wife and I left the building. We reached the barracks and they gave us soup and bread. We ate because we were hungry and cold. Then my daughter and son-in-law took us to Çekmece. I didn't want to stay there. There was no electricity, no water. There was no food. I went to my daughter who lives in Mersin. There, AFAD gave us coats and clothes. God bless them. (H. K. male, retired, 70 years old, high school graduate, Mersin)

In his narrative, H.K. stated that they received help from the military barracks and AFAD. His statements show that they migrated to access basic needs in cold winter conditions in the following days.

When we look at the interviews in general, we can see that people were forced to leave the cities due to psychological issues, housing problems, clothing and nutrition problems. High rent prices, unemployment risks, access to health facilities, pollution and the negative environment were also among the reasons why people chose to leave. I also observed that especially people who were under the rubble suffer from emotional breakdown due to the psychological pressure of not being able to respond to calls for help of babies, children. The number of interviewees expressing their concerns about the calls for help after the earthquake were quite high. At this point, I can say that the experiences of those who managed to survive today have led to traumas. These narratives show that this demographic movement is temporary in the form of evacuation and relocation rather than migration. However, I should note that due to the reconstruction of the city takes time, individuals make material and moral investments in the places where they are relocated, such as the education of children and the formation of friendship ties. At this point, measures should be taken before the migration in question turns into permanent migration, and reconstructions should be accelerated to ensure the return of the local population.

### **Choosing a new place for relocation**

Of the 11 provinces where the effects of the 2023 earthquakes were felt, Hatay and Antakya were the most damaged. Due to the shocking impact of the earthquake, the cold and rainy weather, and the need for shelter and nutrition, thousands of people had to leave their homes. The earthquake survivors, who had housing problems—as the centre of Antakya was heavily damaged—moved in with their relatives living in the districts and villages of Hatay. We can say that reverse migration from city to the village took place. When we look at the places preferred for migration we can say that the first migrations were

towards the rural areas of Hatay where people could easily reach. For example, districts such as Altınözü, İskenderun, especially Arsuz, Yayladağı, etc. were the places where people preferred to migrate. Arsuz is almost called “little Antakya”. Similarly, İskenderun became one of the districts where a large number of people from Antakya settled.

The population forced to migrate due to the limited number of relatively undamaged houses or high rental prices in these areas preferred to go to other provinces in Türkiye such as Mersin, Adana, Tarsus, Ankara, Istanbul, Eskişehir, etc. Relatively low-income families, those who had the financial means but did not want to leave the land they cultivated, those who could still maintain their jobs, and individuals who did not want to migrate preferred to stay in containers. It can be seen that provinces close to Hatay, safe in terms of earthquake and low rent prices are preferred for migration. Mersin is at the top of these provinces due to its geographical proximity and the relationship with relatives. At the same time, we understood that Mersin, like Ankara, is preferred because they are safe in terms of earthquakes. Another criterion for choosing the place of migration is rent prices. For this reason, a large number of people from Hatay migrated to Eskişehir, which is considered to have relatively lower rent prices compared to Ankara and Mersin.

The daughter of the family we stayed with in Mersin was studying in Eskişehir. She said you can find a job and rents are more affordable there than in Mersin. That's why we came to Eskişehir. The house rents in the nearby provinces became expensive and Eskişehir was cheaper. Mersin and Adana were very expensive. We were scammed in Mersin. Rents increased everywhere. We made a deposit of 1.700 TL. It turned out that there was no such house. That's why we chose Eskişehir. When I arrived, the house rent was 2.000-2.500 TL. In Mersin it was 10.000 and 12.000. It felt like a blessing. That's why we chose Eskişehir. People got angry with us because rents increased when the earthquake victims came. (R.H. female, 30 years old, university graduate, executive assistant at a daycare centre, Eskişehir)

From R.H.'s narrative, we understood that rent prices are effective in determining where to migrate. As the number of houses in Hatay were lower than the demand, and some people took advantage of the situation, the average annual rent of a house in Hatay increased from 5,000-6,000 TL to 8,000-10,000TL. In addition, the post-earthquake migration to nearby provinces increased the demand for housing in these cities, resulting in an increase in rents. For example, in cities such as Ankara, Eskişehir and Mersin, which received migration after the earthquake, rent prices increased despite restrictions. This was a very difficult situation to overcome for the earthquake survivors. This situation made it difficult for people to find houses and caused many of them to return to Hatay. Those who returned stated that they could not find a house in Hatay, and that the rental prices of houses in rural areas were higher than before. F.G.'s narrative explains the situation as follows:

You almost lost your life but people don't understand you. They raise the rents as they please. They can't raise as they want. We can make a complaint. In our own hometown, they raised the rent to 8.000 TL-9.000 TL. How can we not get mad? My husband's monthly salary is 7.000 TL. I used to get angry when they increased the rent in other

cities. In my hometown, they rent the houses which weren't damaged for this price. (F.G. female, 35 years old, high school, not working, Eskişehir)

In her narrative, F.G. explains that some landlords, taking advantage of the increased need for housing after the earthquake, rent out their houses at a higher price than normal.

Altınözü, Reyhanlı, Yayladağı were not damaged. The population of Altınözü increased. Rents have increased. It is a pity if people in my hometown are doing this now. It was 2.000 TL-3.000 TL before the earthquake, now they want 15.000 TL. They want 10.000 TL. 300 euros the man had to accept. His wife works in Altınözü. We are in a very strange situation. (Z.L., female, 38 years old, teacher, Antalya)

The narratives of Z.L. express resentment towards the increase in the rental prices of relatively intact houses in rural areas in and around Antakya. It can be stated that this situation was effective in people's decision to migrate. In response to these cases, the Provincial Trade Directorates and the Tax Office compared the prices of rented houses before and after the earthquake and tried to take measures against price increases. The state has announced that people will be fined between TL 33,000 and TL 331,000 if an unfair price increase is detected. They also announced that in case of market distorting actions, fines ranging from 100 thousand TL to 2 million TL can be imposed (Human Rights and Equality Institution of Türkiye, 2023). Although sanctions against disproportionate rent increases have relatively restricted increases, the scarcity of undamaged houses in Hatay has made it necessary for returnees to reside in tents or container cities.

### **Post-earthquake migration and adaptation problems**

We understand that individuals who migrated after the earthquake generally had a desire to get away from the disaster they experienced. It was also understood that they were reluctant to adapt to where they were. During the interviews, it was observed that elderly people had adaptation problems compared to young individuals between the ages of 20-30. As we know, "various groups such as elderly people, individuals with physical or mental disabilities, children, women, migrant communities, asylum seekers are groups with a much higher potential for vulnerability in disasters" (Çakır & Atalay, 2020: 170).

I took my mom's and dad's medicines and went home. They have heart disease, diabetes and high blood pressure. They were already stressed. They are over 75 years old. My parents and mother-in-law lost their house, so we rented a house for them in Ankara. My father-in-law suddenly became ill...He has a severe blood disease. We came to Ankara so that I would not leave them alone and because of the asbestos incident, bad weather. We also came because of education, health, housing problems...I decided to stay here so that the children would continue their education and so that they would not breathe bad air. I also stayed to take care of my elders. Sometimes you need to find medicine but you can't. These are very important medicines. Sometimes they don't give them because they want to sell them with the increased price. You have to struggle with all these things. (D.H. female, university graduate, teacher, 38 years old, Ankara)

D.H.'s narrative describes a woman's migration journey with her children and elderly parents with chronic illness. We understood that elderly people with chronic diseases such as diabetes, blood pressure, heart disease etc. migrate in order to continue their treatment.

Our house was at the centre. The demolitions were mostly at the centre. The air was full of dust. There were insects. The smell of dead bodies was so bad for my mother that her lung was inflamed. She did not use a mask. She has asthma. She had shortness of breath when she smelled it. There was no electricity. I couldn't take the her medical device, but even if I could, there was no electricity. Believe me, people lived there because they had no other choice. We also did not have any other options, but I wanted to create an opportunity. We are looking for a house in Antakya. If we find a house, we will move. There are no job oppotunities, the rents are high. We took shelter in a relative's garage for a while. Then they were disturbed by the noise. I brought my belongings and put them in a corner of the garage. After that they told me to remove them from there. I can't bring those things here either. I don't have 30.000 - 40.000TL. I can't stay here for my life anyway. If you sell them, to whom will you sell them? If I sell them, how will I get them back? I don't have any money. I am in a strange stage of emptiness. We have no financial and moral security. (R.H. female, 30 years old, college graduate, executive assistant at a daycare centre, Eskişehir)

R.H.'s narrative tells the story of a young girl's efforts to save her mother, who suffers from asthma, from the unfavorable conditions of the city. We understood that they feel "emptiness" due to negative reasons such as their issue with their relatives and the increase in rent prices.

Sometimes I tell to myself. Will they take my dead body to Antakya? Will they bury me there? If you are born there that means you will die there. My sister-in-law's father is in Antalya. My brother, my sister-in-law, her father-in-law are also there. My sister-in-law's father-in-law couldn't take it anymore. He said take me to my house in Antakya and even if it is destroyed I'll set up a tent there. If I die, I'll die there. He died within a week. He came to Antakya and died in that tent. He was 60 years old. He didn't have a chronic disease. He had a heart attack. He said, "I can't live anywhere else. Why did you take me to Antalya? Take me home". He missed his hometown. He was in the same situation as me. (D.K., female, 58 years old, not working, primary school graduate, Eskişehir)

D.K. explains her longing for the city where she was born and raised and her wish to be buried in her hometown. We can understand that people who have developed sense of belonging to their cities wish to return to their hometowns, even if the living conditions are not good enough.

My mom doesn't feel psychologically well. She had a breakdown. She started having unbelievable things. She said if I die, don't bury me here. It was really stressed psychologically. It is very strange to witness these at this age. Is it always going to be like this from now on? I worked all these years, got retired and owned a house. My house is gone. Now I am stuck in the middle all alone. (D.H. female, teacher, 38 years old, Ankara)

The narratives of D.K. and D.H. revealed that there were concerns of elders, including the sudden disappearance of their lifelong savings and the expectation of being buried in Hatay in the event of death. In both narratives, it is possible to understand the feelings and thoughts of individuals who want to be buried in their hometown. Furthermore, I encountered similar adaptation problems in children. Some children were reluctant to return to Hatay due to fear of the earthquake.

My daughter can't get over the earthquake. She cried a lot during the earthquake drill conducted at school. She was very scared. She lost her friends. She saw their pictures on the school website. She wrote letters to them and told her teacher. My daughter never wants to go back. My son is young too. He needs his father. For example, my son's speech skills has also deteriorated. For example, he says phrases like "the house is broken". He is confused. Memories of his grandmother's house is fading from his memory. (D.H. female, teacher, 38 years old, Ankara)

D.H. reveals how the earthquake affected children. Therefore, it is important that both older individuals and children benefit from psycho-social support. An example is provided through an interviewee who shared the experiences of her son, who was preparing for the university entrance exam. She expressed her concerns regarding her son's hopelessness for the future and pervasive feelings of emptiness. She mentioned that her son had difficulty in perceiving exam questions after the earthquake. Similarly, another interviewee, the mother of a student also preparing for the university entrance exam, articulated that while her child was very successful before the earthquake, after the earthquake, he had difficulty focusing. She stated that he was not as successful as before and he was devastated.

Women are the most affected group in the aftermath of the earthquake. The narratives show that most of the time, women took care of the children and elderly parents as men returned to Hatay and work. Thus, we can say that the women struggled with more than one problem.

Most of the men stayed in Hatay. But women moved to other cities with their children for their education and mental health. Mothers made more sacrifices. Most of the men said take the children and leave, I will work and send you money. (D.F., female, 23 years old, high school graduate, not working, Eskişehir)

D.F.'s word shows why women's responsibilities increased significantly after the earthquake. Another interviewee stated that they decided to leave the city as they gave importance to the education of their children and wanted to create better conditions for them.

If we stayed in a container in Hatay it wouldn't be good for children's education. We did not want that. Then we had to choose a city. My son's house in Istanbul was nice, but there is a danger of earthquake there too. We came to Eskişehir. Believe me, my mental health was so bad and my husband went to Saudi Arabia to work. One day I went to enroll my son in a tutoring centre and the tutor told me that they felt very sorry for us. I couldn't hold my tears and I cried. My children also feel sorry for me. We went through such a tough time. Do you know what we used to say to each other in Hatay, "Were you able to find the dead body and bury?" (A.H. 44 years old, high school graduate, not working, Eskişehir)

A.H.'a words reveal that she has not yet overcome the psychological effects of the earthquake. Her situation was accompanied by a series of problems such as her husband going abroad. She also had to take the responsibility of her children, while adapting to a new place.

I saw that there were many woman who built a new life with their children because their husbands had to work in Hatay or in a different area. One interviewee stated that her husband left to earn money but they have not heard from him since then. Another interviewee said that her friend's husband did not call her or send her money after he went abroad, so she had to return to Hatay alone.

I also observed that some women, who had no work experience or qualifications, had to take care of their children and make a living by working in cleaning jobs or making local dishes at home. We understood that divorces also took place after the earthquake due to economic difficulties and conflicts between spouses.

This earthquake tore many families apart. Many men left their families. Women did not want to stay in an unhealthy environment because of their children. Men wanted to return because their jobs were there. Then the woman said you can stay here, I can take my children and go. Some men just told the women to take care of themselves. Men are used to their women struggling to earn their own living. They make meatballs, cakes, jams and sell them. But there is no network here. You need network. After hearing that men say, "You should have stayed in the tent". (D.K. female, 58 years old, primary education, not working, Eskişehir)

D.K.'s narrative reveals that due to uncertainties about the future after the earthquake, there were differences of opinion between spouses. Women's demand to leave the earthquake zone for their children's education and treatment and men's decision to stay in the city to work or cultivate their fields, resulted in breakups. Many women moved with their children to safer locations, while most men remained in the earthquake zone for their jobs to support their families.

Believe me, three out of five families divorced after the earthquake. Women started to make requests. They should thank God that we survived and did not lose our children. They should not ask for anything. Everything is about patience. No one has anything left. We are crying our hearts out. Now should we ask for a house? I only cry for the children. Such situations happened in Mersin, Tarsus, Antakya after the earthquake. A friend called me four days ago. He said he wanted to come to stay with me. He had an argument with his wife. This earthquake tore many families apart. May God protect us from the worst, give us patience and wisdom. This earthquake has ruined everything. People's mental health is not good. They don't know what to do, how to speak. If they say hello to me, it is as if they swear at me. (E.L. male, 65 years old, retired, primary school graduate, Eskişehir)

When we analyze the narratives of D.K. and E.L., we understand that in the process of coping with the difficulties encountered after the earthquake, disagreements between the spouses were experienced and these disagreements often resulted in divorces.

During the interviews, I encountered people who had to relocate their spouses and children to different cities for education and health and had to return to work or to cultivate their yards.

Similarly, some public officials have relocated their families to a safer city and returned to their jobs. It has been observed that some members of certain professions, for whom it takes a long time to establish a network, have developed strategies such as leaving their children to their grandmothers and reopening their workplaces in İskenderun. Looking at the narratives in general, the earthquake profoundly affected all areas of society and reshaped family structures. At the same time, there was an increase in divorces due to incompatibility and financial difficulties, as well as a creation of single-parent family structures as a result of death.

Furthermore, I can say that the responsibilities imposed on women due to gender roles have increased. The number of people women are obliged to care for (children, elderly, disabled, etc.) increased. At this point women's educational level, income level, and work experience became important. In other words, their social capital is efficient in facilitating the process. It has been observed that women with middle and upper economic status have the opportunity to live in relatively better conditions and have job opportunities, while women with low income and no access to education generally work in unskilled jobs such as house cleaning, elderly care, etc. without insurance. Based on the analysis conducted on narratives, we observed that women in general and women with no access to education and no work experience in particular were significantly affected by the earthquake and this situation made them even more vulnerable. Vulnerability is the social, economic, psychological and environmental sensitivity of individuals, society or system to dangers. "Resilience" often taken as flexibility or durability. It is defined as a community's and system's ability to withstand social, psychological, and physical challenges during disasters and emergencies. It involves coping with these issues and recovering with minimal damage. The greater the resilience of an individual or a society against disasters and the lower its vulnerability. In order to mitigate the consequences of disasters such as earthquakes, it is necessary to enhance the resilience of society to disasters (Varol & Kırıkkaya, 2017: 1-2).

Despite all the problems about housing, health and education people of Hatay today are trying to adapt to their new life. Although there is a general conviction that "nothing will ever be the same again", the locals seem to have high hopes and motivation for Hatay. In the interviews, those who had to migrate due to reasons such as children's education, unemployment, health problems of the elderly, housing, transportation, socialization, etc. stated that they would like to return to Hatay as soon as possible if the problems were solved.

### **Between transience and permanence**

I understood that almost all of the interviewees from Hatay have not made a clear decision as to whether they are temporary or permanent in their provinces, but they are highly motivated to return. However, we understood that the complexity of the process they are going through leads to feelings of uncertainty and helplessness.

There is definitely uncertainty and uncertainty is a really bad thing. You don't know what to do. You don't know what is going to happen. (R.H. female, 30 years old, university graduate, executive assistant at a daycare centre, Eskişehir)



R.H.'s narrative reflect the situation of the most interviewees. R.H. stated that she lives with her elderly mother as her father left them. After the earthquake, they decided to migrate to Eskişehir for the treatment of her mother, who suffers from asthma and to solve the housing. For this reason, they stated that the uncertainty about returning continues and that they cannot plan for the future.

I regret that I came here. I told my daughter. It's my hometown. Even if it's destroyed it is my hometown. No matter what happens, for me it is my hometown. We will return. I wish I had stayed from the beginning. I wish I had never come. I would have settled somewhere in the villages. I came here so as not to leave my daughter alone. When I went to Serinyol during the elections, it gave me a sense of peace. Even those demolished buildings feel like something. After all, it's your hometown, you know. I feel like I belong there. We are in Eskişehir now. My family stayed there. They set up a tent next to their destroyed house and they still live there in a tent. My brother is there too. They live with my mother. My mother is 82 years old. She says she can't live anywhere else. I follow the news about Hatay every day on social media. I look at the old and new state of Antakya. I cry. I hope it will return to its old state. That's why I want to return to Antakya so much. Antakya is different for me. Even the soil is very different for me. I bring vegetables from there. I bring coffee, especially the spices of Antakya. Even the vegetables there smell different. I miss it a lot. I miss my neighborhood the most. There is no one there now. Even though everything is destroyed when I go back to my doorstep it gives me a sense of peace.. It is a very strange feeling. (D.K., female, not working, 58 years old, primary school graduate, Eskişehir)

D.K.'s narrative presents the forced migration journey of a mother who had to follow her daughter as she was searching work. The narrative helps us understand her longing for her relatives, hometown, which she refers to as "my land". On the other hand, the migration of her daughter is vital for generating income and living in healthier conditions. These two different approaches actually contain significant data in terms of showing why migration is experienced differently between different generations within the same household.

These testimonies show that older individuals are more likely to return than younger ones. The main reason for young people's willingness to stay in the new settlement is the concern for the future. In addition, the views that it will take time for the city to get back to its old state seems effective in the decision making process. According to young people, there is a strong belief that the way to cope with problems such economic inadequacy, unemployment, etc. can be possible by seizing opportunities in the new living space. For this reason, the willingness of young people to adapt is significantly higher than older people.

We will never leave Antakya. Hatay is where we were born. There is no place like Hatay. Hatay is like a paradise. I thank God but he's turned everything upside down now. I hope it will get better. This city is very different from Antakya. We miss Antakya. Of course we will go. We'll go with the help of God. We will go back after we recover. Many people go back because it is our hometown. People went to Tarsus, in Mersin and if eighty percent left, fifty percent returned. What will people do? They cannot work. They have to live. They have their lands there. They will plant crops. They will harvest, eat, make a living. We will definitely return. But we will be here for up to a year. We can't leave until the rubble is cleared. Is there any place more beautiful than one's own hometown? (E.L. male, 65 years old, retired, primary school graduate, Eskişehir)

In E.L.'s narrative, we saw that most of those who migrated were unable to stay where they were and that they made efforts to return for these reasons. In addition to feelings of longing, hope, belonging we understood that the decision to return is taken due to reasons such as unemployment.

Eventually we will return. I came to Ankara with my daughter because our house was destroyed. My grandson is studying at university in Ankara. We came to his house. We will be together until he finishes school. My other son came with his family. His daughter is preparing for the university exam. My other son's daughter won the fine arts high school in Antalya. They went to Antalya after her. One of my daughters is in Arsuz. She went back to Hatay. Unfortunately we are torn apart, but we will all return. But now we have to live outside. We don't have a house. If we go back, where will we go? It is hard to find a house there too. Rents are also high. (G.Ö., female, 75 years old, primary school, not working, Ankara)

G.Ö.'s words underline that many families went to live with their children who settled in different cities for work and education. The high rents in Hatay and the scarcity of safe houses to live in are factors that affect their decisions.

We did not leave Hatay. People started to get sick due to lack of water and electricity. They didn't migrate, they just wanted shelter. But sooner or later everyone will return to their hometowns and many of them already returned. I think ninety percent will return. Most of those who migrated are worried about their children. They are worried about school and exams. When the school closes, people will return to their hometowns. I am here for my child. I was born in Hatay. I will die in Hatay. (K.T., female, 42 years old, primary school graduate, not working, Mersin)

K.T. helps us to understand why they decided to migrate, as she underlined the basic needs and their children's education as the main reason for their migration, although they would return when conditions improve in Hatay.

If I had come to Mersin on vacation before the disaster, of course it is a very beautiful city. But no, I cry every day. I tell my husband that I want to go. I can't fit in anywhere. I can't do it. We will return. If I am going to die, I want to die in my own city. I will not wait for things to settle to return. Most of my friends and loved ones are dead. We will save Hatay. We will make it flourish again. Once we take a step, the rest will follow. (G.D., female, 40 years old, high school graduate, not working, Mersin)

G.D. stated that she had difficulties in adapting to the place they migrated to and that she would not wait for conditions to improve to return to Hatay. This shows that people's belonging and love for their hometown also effected their decision to return.

As an earthquake survivor from Hatay, I won't give up on Hatay. I am temporary here, that's how I console myself. I will return as soon as possible. Thank God my sisters and brothers are there (referring to Antakya). They live in tents. Some of their houses are moderately damaged. They are trying to strengthen it. Life is somehow going on there. In one way or another. The reason for my emergency is my children's education. I think the local people from Antakya who have very deep-rooted family ties there will never give up. For example, I will never give up. I will go back. (D.F., female, high school graduate, 45 years old, former business owner, currently not working, Eskişehir)

D.F. stated that they migrated to Eskişehir for the education of their children. She also stated that they are willing to return to Hatay if the conditions are improved. This narrative is similar to the narratives of many interviewees.

We can't live elsewhere. Our roots are there. If I explain this elsewhere, it will sound very strange to people. We live together. We are very different. I believe we will return as soon as the conditions are good. I came to Antalya but I cannot live here. I am 800 km away but I am happy when I see license number 31. (Z.L. female, university graduate, 38 years old, teacher, Antalya)

Z.L.'s emphasis on roots expresses her belief that Antakya is her ancestral land. She expressed the difficulties of living in another city and not being able to adapt.

I wish I could invite my neighbors over for morning coffee, but there's no such culture here. You are alone all the time. No one knocks on the door. In Antakya everybody visits each other. They invite each other for tea and coffee. We miss our hometown a lot. I share everything I cook with my neighbors. They look surprised because they are not used to it. One day we met an old woman in the market and I invited her to my house for coffee. The woman was surprised. She said, "Where are you from?" (D.K., female, not working, 58 years old, primary school graduate, Eskişehir)

In the interviews we conducted on the possible adaptation problems faced by middle-aged and older women who spend most of their days at home, relationship with neighbors was the main issue. The situation is not different for men. In particular, retired or unemployed individuals reported that they no longer had the habit of getting together frequently with their peers and that they longed for old friendships. When the interviews are examined, we understood that the deprivation of friendship and the longing for these relationships were effective in individuals' decision to return.

With these stories, the paths that need to be followed for rebuilding the "well-being" of the society after the earthquake become clearer. Based on these narratives it can be said that both social structure and the physical structure of the areas should be taken into consideration in the reconstruction process. The morning coffee tradition, a space for women to connect, has also been seen as a special moment for sharing worries and finding comfort for centuries. A similar issue is also present among men. Many of the male interviewees stated that they struggle with the feeling of "loneliness" caused by being separated from old friends, relatives, acquaintances, and that they would like to return as soon as conditions in their hometowns improve. Although it is not physically possible to reconstruct the city, some efforts can be made to create neighborhoods where survivors can live together. The oral history study conducted 35 years after the 1970 Gediz earthquake, revealed that social structure as well as physical structure is among the factors that need to be taken into consideration in the reconstruction process and that the earthquake victims demanded preservation of the social structure in Eskigediz (Erkan et al. 2007: 145).

We have 2 projects. I will try to finish them. Prefabricated houses and container projects. There is a land which belongs to our foundation in Altınözü. We are thinking of making one there and we requested a land from the municipality. I think we will build on that land. All of these require huge financial resources. With the help of God, we will try to

do it. Both of our churches in Sarılar and Tokaçlı collapsed. Nine of our 13 churches in the region collapsed. The Church of the Virgin Mary in Tokaçlı also collapsed. I lost 41 of my children from our community in Antakya. But we are scattered in Istanbul, Ankara, Izmir, Antalya. Our children are there. We are working to bring them all back. At the moment, I have resettled 15 families from Antakya in Altınözü. (P.A. male, master's degree, 31 years old, priest, theologian, patriarchal deputy, Antakya Altınözü)

From P.A's words show that several members of the Christian community lost their lives and many churches were destroyed. However, despite this, they stated that they were making efforts to return. G.H. expressed his desire to return to the ancient city where his ancestors have lived for centuries with the following words:

One of our Protestant brothers died. We couldn't even find his body. Five Catholics died. The Orthodox community suffered the greatest loss. Out of 1,350 people in the Orthodox community of Antakya, 52 people died. As the Protestant community, we came to Mersin for our lives. As time passed, we realized that we could not live away from Antakya, so 6 families returned to Antakya. They are staying in a container. I also prepared a project. I wanted to bring all Protestant families in Antakya and Mersin together. I made an appointment with the governor. I said Antakya is a very colorful place with its Muslims, Christians and Jews. We should stay together. The governor's Office and local authority responded positively to our request. Now the three communities, Protestant, Catholic and Assyrian, will build prefabricated houses and live together. We will establish a Christian village. The Orthodox gathered the entire Orthodox community after the earthquake and brought them all to Mersin. They will build a prefabricated house on the land belonging to the church in Altınözü and bring those from Mersin there. The rest of the people contacted the municipality and thanks to them they allocated land to build prefabricated houses. (G.H., 58 years old, male, retired, primary school graduate, Mersin)

G.H. makes it clear that the state administration and local administrators made efforts to reunite the religious communities living together in Hatay before the earthquake. It is also understood that the Christian community's desire to live together and the land they requested for this purpose were positively received by the state and the local authority.

When will we be back? It's like winning the national lottery, but not knowing the date you get the money. We'll be back, but the date is uncertain. All my friends are in different cities. One is in Bursa, another in Eskişehir, another in Konya. We all scattered around different places like a bunch of chickens. We lost the head of the congregation and his wife in the rubble. We lost so many of our friends. My wife also says that this was not an earthquake, it was an apocalypse. (H.F., male, 70 years old, retired, high school graduate, Istanbul)

Additionally, H.F. noted that the Jewish community in Hatay, which has been declining in number, was affected by the earthquake; the synagogue was destroyed, and the community leader and his wife lost their lives. He stated that the number of Jews, which was 17 before the earthquake, decreased to 15 afterwards. He noted that they temporarily relocated to safer provinces with lower earthquake risk and plan to return once the city has recovered.

Most of the Uzbeks have left. They went to other provinces. If we have a population of 6,000 now, 4,000 have left. But they are coming back. Their children can't get used to those cities. They come back. They always settle in tents. People from Antakya are

forced to leave. There is no place to live. But now people from Hatay have started to return. There are 480 containers. They are slowly coming to live in the container city. We built 422 tents. Our hearts ache when we see Antakya. Our brothers and sisters died in Antakya. These things cannot be forgotten. (G.L. male, primary school graduate, civil servant, 59 years old, Antakya)

In 1982, Uzbeks were settled as immigrants in various provinces of Turkey, including Hatay. It appears that many Uzbeks migrated in the immediate aftermath of the earthquake to escape its negative effects. I understood that most Uzbeks who faced adaptation difficulties in different cities returned and are now living in container cities.

When the effects of 2023 earthquakes are considered from the perspective of cross-border migrants, it can be said that the difficulties experienced are doubled. In addition to the small-scale social/cultural disaster caused by leaving their country and being separated from the physical and cultural environment they live in, the earthquake after the earthquake makes the situation even more difficult (Duyar & Çeltikci, 2024: 206) For example, many Syrians who migrated to Turkey after 2011 experienced significant feelings of anxiety, hopelessness, and concern. They expressed the material and emotional challenges of building a new life in a foreign country (Erdoğan & Kaya, 2015, p.326) Syrians had to migrate for the second time due to the earthquake. This situation shows that Syrians have experienced double victimization. Interviews with Syrians indicate that the earthquake caused many socio-economic and psychological problems.

In addition, people who survived the earthquake will also have to struggle with the problems of being apart from their family and adapting to the new situation as immigrants (Duruel, 2023: 234).

Deep down I want to leave. It won't be the old Hatay anymore. But I still want to go. I want to relive my old days and feel the peace. Because I grew up there, I had memories, friends. That's why I feel like I belong to Kırıkhan. I am from Hatay, I am a dual citizen. I became a Turkish citizen. I wish the situation would improve and everyone would return. It does not seem possible for us to return before a year. Many Syrians died. But those who are alive want to return. (L.G., female, 19 years old, not working, Istanbul)

L.G. left his country 12 years ago due to the civil unrest in Syria and migrated to Türkiye. While they thought they had found peace in Kırıkhan, they had to migrate again because of the earthquake. I understood that this situation made the adaptation process of Syrians twice as difficult.

## **Conclusion**

The 6 February 2024 Maraş and 20 February 2023 Hatay earthquakes killed thousands of people and displaced many more. According to the May 2023 report of the Directorate of Mining Technical Research, the most important reasons for the loss of life and property after the 2023 earthquakes are the magnitude, duration, depth of the earthquake, liquefaction due to the ground. In addition to these reasons, deficiencies and/or inadequacies in construction practices, concrete quality, corrosion, age of the building, unauthorized renovations in the buildings were evaluated as factors that increased the damage. The social consequences of the series of

earthquakes, which are considered to be the catastrophic events of the century, are quite high.

The devastating impact of the earthquake deeply affected especially women, children, the disabled, the elderly, asylum seekers and individuals with chronic diseases. The findings from the interviews indicate that the earthquake disrupted life in many areas. The earthquake altered the course of daily life and made living more challenging in terms of economic, health, education, housing, and psychological factors. In the first days of the earthquake, it was experienced that all socio-cultural, economic, gender, status, etc. structures were turned upside down. The rich became poor in a minute and people felt they were going through a phase of newfound equality. Unprepared for the earthquake, people living in Hatay threw themselves outside, leaving most of their possessions under the rubble. Most of those who survived the earthquake lost their savings and jobs less than a minute. Thousands of people lost their lives and many were buried in cemeteries as unidentified.

More than one year after the earthquake, hundreds of people are still hopefully searching for people who are missing. The earthquake created an unforgettable trauma for people living in Hatay in general and Antakya in particular. In the first days of the earthquake, a large number of people embarked on a journey full of uncertainty to many provinces of Türkiye in order to get away from the traumatic environment and to access basic needs.

In order to protect the multicultural structure of Hatay, the Christian community's request for land from the state was welcomed positively and efforts had begun in this regard. The community also stated that the Jewish community would return. On the other hand, for asylum-seekers, the earthquake created a double victimization. Syrians, who migrated due to civil unrest in their country and tried to establish a new home, were forced to migrate again, which made them even more vulnerable.

The earthquake also brought several concerns among older generations about not being buried in their ancestral land. People kept worried to have lost their jobs. This was accelerated with future worries about education of children, which also meant to have increased responsibility for women. We observed that most of the men whose houses were destroyed in the earthquake and who had to continue working, returned to Hatay or went abroad after relocating their families to safer provinces. At this point, we understood that women are trying to survive alone in their new living spaces. Women had to take on more responsibilities in caring for their parents, dealing with health issues, and managing their children's education and social activities. There has been a noticeable shift from smaller family units to extended families, largely due to rising rent prices and the need to support elderly parents. As a result, women's responsibilities continued to grow in the larger family environments.

Uncertainty, helplessness, struggle for survival, material and moral losses have been observed to create a sense of in-betweenness in individuals who migrated. Starting a new life, adapting to the changing living conditions financially and morally, and coping with the problems that have developed made the situation even more difficult, especially for older individuals, women and mothers who have gone through divorce. It was seen that almost all interviewees lost their homes and jobs.



Furthermore, we understand that people from Hatay migrated due to compulsory reasons and nearly every interviewee is in favor of going back. The clarification of the decision to return is in parallel with the process of solving problems such as housing, unemployment, etc. in Hatay. At this point, Hatay's reconstruction efforts should be accelerated, and necessary efforts should be made to redevelop the society. It is possible to entice investors to make investments in the area. Migration can be avoided and returns can be expedited by improving local employment.

In the interviews, "hopelessness" and "uncertainty" were the most prominent feelings that came to the fore in conversations about future plans. "Uncertainty" causes a decrease in hope for the future and leads to psychological depression, helplessness, in-betweenness, loneliness, among other issues. Uncertainties need to be eliminated in order to increase hope of the individuals. At this point, publicizing the services planned for the reconstruction of the city and accelerating the process will greatly reduce the feeling of "uncertainty".

When we analyze the statements of the interviewees, we see that almost all of the people from Hatay who participated in the interview have a tendency to return. At this point, ensuring return will be possible by solving problems such as housing and unemployment. The material and moral investments made by migrants, such as their children's education and the formation of friendships, will make it increasingly difficult to return as time goes on. Therefore, expediting Hatay's restoration and including the local population will reduce uncertainty, increase optimism for the future, and ultimately support the return plans of those who have gone.

## Endnotes

- 1 Constantine P. Cavafy's poem The City seems to shed light on the feelings of people from Hatay, including myself (as an "earthquake survivor from Hatay/Antakya"), who had to leave Hatay due to the earthquake. Wherever we go, temporarily or permanently, we continue to live in the streets of Antakya, where we were born and raised. In a way, we continue to live in Antakya with the conversations we have and the meals we cook. I am grateful to the people from Hatay who, despite their losses and the intense emotional difficulties, were humble enough to participate in my interviews and generously shared their deepest feelings with me. I dedicate this work to the thousands of people who lost their lives in the earthquake, people who lost their loved ones, their homes, their memories, their neighbors, their hometowns, who left the dead bodies of their loved ones behind, who had to leave their hometowns either for a short time or permanently.

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## References

- Bates, D. G. (2009). *21. Yüzyılda kültürel antropoloji*. Bilgi University Press.
- Cavafy, C. P. (1992). "The City" from *C.P. Cavafy: Collected poems*. Edmund Keeley and Philip Sherrard. Translation Copyright, by Edmund Keeley and Philip Sherrard (Trans.) Reproduced with permission of Princeton University Press.
- Çakır Ö. & G. Atalay. (2020). Afetlerde özel gereksinimli grup olarak yaşlılar (Elderly People as a Group of Citizens with Special Requirements in Disasters). *Resilience*, 169–186. <https://doi.org/10.32569/resilience.630540>
- Deniz O., M. Z. Yıldız, S. Parin & R. Erdoğan (2017). Deprem ve göç: 2011 Van depremi örneği. (Earthquake and Migration: 2011 Van Earthquake Case") *Social Sciences Studies Journal*, 3(7), 1426–1444.
- Diñç, T. F. (2023). Türk Basınına Göre 19 Ağustos 1966 Varto depremine yapılan dış yardımlar (Foreign aid to the August 19, 1966 Varto earthquake according to the Turkish Press). *Gaziantep University Journal of Social Sciences*, 22(1), 201–222. <https://doi.org/10.21547/jss.1226344>
- Duruel, M. (2023). Afetlerde göçmen olmak: 6 Şubat depremi Hatay örneği (Being a migrant in disasters: February 6 Earthquake Hatay case). *Mukaddime*, 14(2), 227–255. <https://doi.org/10.19059/mukaddime.1381750>
- Duyar, İ., & Çeltikçi, M. (2024). Afetler(d)e antropolojik yaklaşım. (*Social service in disasters*) Istanbul University, pp. 204–208.
- Eraslan, A. (2024). 2023 Depremleri sonrasında 'birlikte yaşama kültürü' bağlamında 'Hataylılık' kent aidiyeti ve yerellik (Urban belonging and locality of Hataylılık' in the context of 'cultures od living together' after the 2023 earthquakes), *Antropoloji*, (48), 59-73. <https://doi.org/10.33613/antropolojidergisi.1475826>
- Erdoğan M. & Kaya, A. (2015). *Türkiye 'nin göç tarihi 14. yüzyıldan 21. yüzyıla Türkiye 'de göçler (Migration history of Turkey: Migrations between 14th and 21st Century)*, İstanbul Bilgi University Press.
- Erkan, N. Ç., Seçilmişler, T., abd Boşdurmaz, N. (2007). 35 yıl sonra Gediz depremi: Depremin, *yşayanlar ve iki yerleşme üzerindeki etkileri. (Gediz earthquake after 35 years: The effects on survivors and two settlements) TÜBA-KED Turkey Academy of Sciences Cultural Inventory Journal*, 6, 139–149.
- Gök, Y., Altaş, N. T., & Zaman, S. (2011). Aşkale depremleri ve etkileri (The Aşkale earthquakes and their effects). *Eastern Geography Journal*, 12(17), 161-184.
- Huang H, Wang F, Xiao Y, Li Y, Zhou H-L & Chen J (2022) To stay or to move? Investigation on residents' migration intention under frequent secondary disasters in Wenchuan earthquake-stricken area. *Frontiers in Public Health* 10:920233. doi: 10.3389/fpubh.2022.920233
- Oliver-Smith, A. (2002) Theorizing disasters: Nature, culture, power, in Susanna M. Hoffman and Anthony Oliver-Smith (Eds.) *Culture and Catastrophe: The Anthropology of Disaster*, The School of American Research Press, pp: 23–47.
- Peker, A. E., & Şanlı, İ. (2022). Deprem ve göç ilişkisi: 24 Ocak 2020 Elazığ deprem örneği (The relationship between earthquakes and migration: The case of the January 24, 2020 Elazığ earthquake). *Firat University Journal of International Economic and Administrative Sciences*, 6(1), 125–154.
- Sağıroğlu, A. Z., Ünsal, R. & Özenci, F. (2023). Deprem sonrası göç ve insan hareketlilikleri: Durum değerlendirme raporu [Migration and mobility after the earthquake: Evaluation report]. AYBÜ-GPM (Ankara Yıldırım Beyazıt University Migration Policy and Research Centre) Report Series-15 (Updated 2nd Edition: 15 April 2023). *Yıldırım Beyazıt University Immigration Policy*

*Implementation and Research Centre (AYBÜ-GPM[Ankara Yıldırım Beyazıt University Migration Policy and Research Centre]).*

- Varol, N., & Gültekin, T. (2016). Afet antropolojisi (Disaster Anthropology) *Electronic Social Sciences Journal*, 15(59). <https://doi.org/10.17755/esosder.263244>
- Varol, N. & Kırıkçaya, E. (2017). Afetler karşısında toplum dirençliliği. *Resilience*, 1(1), 1–9. <https://doi.org/10.32569/resilience.344784>.
- Yılmaz, G. & Turan, Ş. A. (2023). Afetlerin etkilerinin zorunlu göç bağlamında incelenmesi: 2023 Kahramanmaraş depremi. *Afet ve Risk Dergisi* (Examining the effects of disasters in the context of forced migration: The 2023 Kahramanmaraş earthquake). *Journal of Disaster and Risk*, 6(4), 1247–1268.
- Zengin, E. (2020). Cumhuriyet Dönemi'nde (Muş) Varto'da yaşanan depremler (1946-1966) (Earthquakes in Varto in the Republican Period (1946-1966), *Turkish Studies - Historical Analysis*, 15(2), 791–811.

### Electronic Resources

- Oliver-Smith, A. (2006, June 11), *Disasters and Forced Migration in the 21st Century*, <https://items.ssrc.org/understanding-katrina/disasters-and-forced-migration-in-the-21st-century/>(Accessed on 28 October 2023).
- Afet ve Acil Durum Yönetimi Başkanlığı. (09.02.2023). *Vatandaşımız Afet Bölgesinden Tahliye Edildi* (A Citizen was Evacuated from the Disaster Area)-Press release, <https://www.afad.gov.tr/28044-vatandasimiz-afet-bolgesinden-tahliye-edildi-basin-bulteni> (Accessed on 09 February 2024).
- Afet ve Acil Durum Yönetimi Başkanlığı. (02 February 2024). Press Release, *Deprem Konutları Kura ve Anahtar Teslim Törenleri Hatay'da Başlıyor* (Earthquake Housing Draw and Turnkey Ceremonies Begin in Hatay) <https://www.afad.gov.tr/deprem-konutlari-kura-ve-anahtar-teslim-torenlere-hatay> (Accessed on 12 February 2024).
- Strateji ve Bütçe Başkanlığı. (2023). *Deprem Sonrası Değerlendirme Raporu* (Post-earthquake assessment report). (<https://www.sbb.gov.tr/wp-content/uploads/2023/03/2023-Kahramanmaraş-ve-Hatay-Depremleri-Raporu.pdf>) (Accessed on 25 September 2024).
- Maden Teknik Arama Müdürlüğü. (2023). *Deprem Raporu* (Earthquake Report) (2023), [https://www.mta.gov.tr/v3.0/sayfalar/bilgi-erkezi/deprem/pdf/DepremBilgiNotu\\_2023-02-06\\_Pazarcik-Kahramanmaraş.pdf](https://www.mta.gov.tr/v3.0/sayfalar/bilgi-erkezi/deprem/pdf/DepremBilgiNotu_2023-02-06_Pazarcik-Kahramanmaraş.pdf) (Accessed on 12 February 2024).
- Türkiye İstatistik Kurumu. (2023). *Adrese Dayalı Nüfus Kayıt Sistemi Sonuçları* (Results of the Address-Based Population Registration System). <https://www.tuik.gov.tr/> (Accessed on 10 October 2024)
- Türkiye İnsan Hakları ve Eşitlik Kurumu. (31.03. 2023). *Barınma Hakkı Bağlamında Deprem Sonrası Kira Artışlarının Değerlendirilmesi Raporu*. (Report on the Evaluation of Post-Earthquake Rent Increases in the Context of the Right to Housing) <https://www.tihek.gov.tr/public/pdf/files/k49u7p.pdf> (Accessed on 28 November 2024)



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# The Impact of Earthquake Disasters on Work Life Sustainability: Reflections from Antakya

Deprem Felaketlerinin İş Yaşamı Sürdürülebilirliği Üzerindeki Etkisi: Antakya'dan Yansımalar

**Fulya Doğruel\***

## **Abstract**

This study examines the impact of earthquakes on the sustainability of working life, focusing on the economic survival strategies of earthquake survivors. Conducted through qualitative research in 2024 in the Antakya district of Hatay province in Türkiye, the study aims to understand the working conditions, daily life challenges, and the methods employed by survivors to overcome these difficulties. Disasters can exert adverse effects on social, economic, cultural, and political structures. Earthquakes, in particular, cause extensive devastation resulting in substantial losses, such as loss of life, property damage, displacement, and infrastructure destruction. Within this context, the primary objective of this research is to explore sustainability in work life under the conditions of earthquakes. The research examines the financial survival strategies of earthquake survivors, their experiences of continuity and discontinuity in their work life, their vulnerabilities and the implications of these conditions on household relationships and future

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prospects. Furthermore, the study aims to comprehend the overall experiences and emotions associated with individuals' work and daily life conditions. The study reveals that social and economic security are crucial for sustaining daily life, enhancing cultural resilience after an earthquake, and addressing the material and emotional devastation experienced by survivors.

**Keywords:** *disaster, earthquake, vulnerability, sustainability, financial resilience*

## Öz

Bu çalışma, depremedelerin ekonomik hayatta kalma stratejilerine odaklanarak depremlerin çalışma hayatının sürdürülebilirliği üzerindeki etkilerini incelemektedir. 2024 yılında Türkiye'nin Hatay ilinin Antakya ilçesinde nitel araştırma yöntemiyle gerçekleştirilen çalışma bu kapsamda depremedelerin çalışma koşullarını, günlük yaşam zorluklarını ve bu zorlukların üstesinden gelmek için kullandıkları yöntemleri anlamayı amaçlamaktadır. Afetler, sosyal, ekonomik, kültürel ve politik yapılar üzerinde olumsuz etkiler yaratabilirler. Özellikle depremler, can kaybı, mal kaybı, yerinden edilme ve altyapı yıkımı gibi büyük kayıplara yol açarak geniş çaplı yıkımlara neden olurlar. Bu bağlamda, araştırmanın temel amacı, deprem koşullarındaki çalışma hayatının sürdürülebilirliğini araştırmaktır. Çalışma, depremedelerin finansal hayatta kalma stratejilerini, çalışma hayatlarındaki süreklilik ve kopuş deneyimlerini, kırılğanlıklarını ve bu koşulların hane içi ilişkiler ve geleceğe dair beklentiler üzerindeki etkilerini incelemektedir. Ayrıca, çalışma, bireylerin iş ve günlük yaşam koşullarıyla ilgili genel deneyimlerini ve duygularını anlamayı hedeflemektedir. Çalışma, sosyal ve ekonomik güvenliğin, deprem sonrasında günlük yaşamın sürdürülmesi, kültürel direncin güçlendirilmesi ve hayatta kalanların maddi ve duygusal yıkımla başa çıkmasında önemli olduğunu ortaya koymaktadır.

**Anahtar sözcükler:** *afet, deprem, kırılğanlık, sürdürülebilirlik, finansal dayanıklılık*

## Introduction

Disasters occur frequently worldwide, causing substantial physical, economic, and social losses on affected populations. In contemporary Türkiye, the increasing frequency and severity of natural disasters-exacerbated by factors such as climate change and urbanization-have increased the vulnerability of at-risk individuals. Earthquakes rank among the most destructive and pervasive natural disasters, imparting profound and lasting impacts on human societies. Severe earthquakes can lead to significant loss of life, property damage, displacement, and disruption of infrastructure and communication networks. Consequently, the economic systems of affected cities may be severely compromised or even collapse, posing substantial threats to the national economy.

Frequently, earthquakes lead to infrastructure disruptions, the collapse of workplaces in residential areas, increased distance between homes and workplaces, road damage, relocation of businesses and workers to other regions, reduced employment opportunities, and significant declines in public transportation, all of which contribute to worsening

economic conditions. Understanding the multifaceted impacts of earthquakes requires not only engineering and environmental analyses but also an in-depth exploration of the human experiences and socio-economic consequences that follow these natural disasters. Ethnography, with its immersive and holistic approach, is essential for revealing the nuanced ways in which communities perceive, respond to, and recover from earthquakes. Through documenting personal narratives, community practices, and local knowledge, ethnographic research offers invaluable insights into the cultural, social, and economic fabric of affected areas. By concentrating, for example, on the economic dimension, ethnography enables researchers to capture the immediate and long-term financial repercussions of earthquakes on individuals, households, communities, as well as the challenges of economic recovery.

Türkiye has encountered numerous catastrophic earthquakes throughout its history. Most recently, the Kahramanmaraş-Antakya centred earthquake on 6 February 2023, caused substantial material and emotional devastation. It precipitated various detrimental effects on workplaces and employees, resulting in significant disruptions to working life and city economy. Besides, it led to loss of life, injuries, and significant losses of workforce, business capital, and resources, all of which affected production and service activities, and consequently, business continuity and inflicted damage upon workplace infrastructures, rendering buildings unusable and severely affecting production facilities, thereby adversely impacting business operations. As such, the earthquake posed threats to the continuity of livelihoods for many individuals and created economic hardship and poverty. As a result, the threats to livelihoods raise critical questions about the conditions and efforts of individuals managing their enterprises – both as business owners and employees – which have not received a thorough examination. In particular, the impacts on business continuity and employment sustainability have largely remained underexplored.

Given the extensive economic repercussions of earthquakes, ethnographic insights are essential to discover how socio-economic status, access to resources, and institutional support can influence communities' capabilities to rebuild themselves and thrive in the post-disaster period. These insights help formulate effective disaster response strategies that are sensitive to the realities of those most affected by earthquakes. Awareness of micro-level impacts cultivates empathy and strengthens disaster management strategies. Social scientists engaged in earthquake ethnographies have a significant responsibility to contribute to inclusive disaster mitigation and risk reduction policies.

This study aims to examine the sustainability of work activity following the earthquake in Antakya, Hatay province through personal accounts of the survivors. Personal narratives play a crucial role in disaster recovery, offering valuable insights into the emotional and practical challenges faced by affected individuals. Although the earthquake did not leave me with personal and material damage, it profoundly affected me as a local inhabitant as I saw the loss of my hometown, close relatives and friends. I believe that documenting the victims' lived experiences is essential for enhancing academic discussions in disaster studies. This approach ensures that recovery efforts directly address the specific needs of affected populations, fostering more equitable and sustainable outcomes.

## Methodology

Earthquake-based disasters affect the physical, social, emotional, and economic conditions of society in a multidimensional manner. The earthquakes in Antakya have led to significant losses and transformations. Understanding individuals' conditions, emotions, and expectations requires a comprehensive perspective. As Merriam states, "the fundamental characteristic of qualitative research is that individuals construct reality in interaction with their social worlds" (2009: 22). Therefore, qualitative research methods enable access to detailed information and examination of social processes within socio-cultural contexts (Neuman, 2020; Creswell, 2013).

For the present study, I employed in-depth interviews and participant observation as data collection techniques and focused on the experiences of individuals affected by the February 2023 earthquakes, who lived in Hatay and worked in Antakya. I conducted both face-to-face and online semi-structured interviews with 15 open-ended questions. Following ethical protocols, I anonymized the participants' names. I gathered data from 20 participants, including 9 women and 11 men aged 20 to 60, selected through purposive sampling on a voluntary basis. I used snowball sampling, with initial participants referring others who met the study's criteria. Additionally, I visited shops and workplaces in Antakya, engaging directly with business owners, employees, and others in their work environments. This approach allowed me to identify a diverse group of participants and gain richer, context-specific data by understanding their experiences in real-life setting. The sample encompasses a people with diverse range of income levels, education levels, age, and occupation. 11 participants are high school graduates, while 3 have completed primary school and 6 hold university degrees. The Table 1 presents their characteristics, including gender, age, and education.

**Table 1. Participant Profiles**

Participant	Gender	Age	Education	Participant	Gender	Age	Education
P1	M	60	University	P11	F	38	University
P2	M	58	High S.	P12	F	43	Primary S.
P3	F	48	High S.	P13	M	58	University
P4	F	50	Primary S.	P14	F	50	High S.
P5	M	38	High S.	P15	F	51	High S.
P6	M	48	High S.	P16	M	58	University
P7	F	35	High S.	P17	M	55	High S.
P8	M	40	Primary S.	P18	M	40	University
P9	M	35	High S.	P19	M	20	University
P10	F	45	High S.	P20	F	30	High S.

The sample consisted of two groups. The first group included individuals who strived to sustain their work in Antakya, ranging from business owners coming from a higher income stratum—often referred to as middle- or upper-class individuals—to small business owners representing lower-income strata, such as shopkeepers and sales workers. The second group included individuals whose work intersects with the marketplace (*çarşı*), the city centre in Antakya. This group comprised those who had to relocate their businesses to surrounding areas, the unemployed, retirees, and individuals who quit working to care for their relatives. I evaluated the sustainability of their livelihoods and the factors influencing their efforts from a multidimensional perspective, using a grounded theory framework. To enhance validity and reliability, I ensured participant engagement, crosschecked the data, and examined diverse perspectives (Merriam, 2009; Neuman, 2020). Using interpretative approaches, which involve understanding participants’ experiences and perspectives within their specific contexts, I analysed the data through the lens of global and national earthquake-related literature to provide a deeper, contextually grounded understanding.

While a broader range of socio-economic groups could provide additional insights into post-earthquake working life in Antakya, focusing on small business owners and financially vulnerable populations is essential for assessing work-life sustainability. Large enterprises in Antakya, such as those in furniture and footwear manufacturing, have managed to sustain their operations relatively better by relocating to safer zones. However, even with these adaptations, they still face labour shortages and financial setbacks. Small businesses encounter greater post-disaster challenges due to limited resources and poor infrastructure, significantly affecting their overall resilience. Therefore, this study sheds light on the immediate and lasting impacts on economically vulnerable groups, emphasizing the need for customized recovery policies.

### **Theoretical Framework**

Disasters are often described as “dramatic” due to their “disruptive nature and the intense emotions” they evoke (Xu & Lo, 2022: 3). The emotional, social, and economic devastation caused by the earthquakes in the Kahramanmaraş-Antakya region left families grieving, disrupted social cohesion, and dismantled livelihoods. Entire neighbourhoods were reduced to rubble, forcing survivors into temporary shelters with inadequate resources, psychological trauma, and uncertain futures. These challenges reveal the need for strategies that address social and economic vulnerabilities while fostering resilience and sustainability. Exploring the interconnected dimensions of vulnerability, recovery, culture, resilience, sustainability, and the revival of business life provides a comprehensive framework for tracing the transition from devastation to recovery.

### **Resilience and Sustainability in Disaster Recovery**

Understanding vulnerability is critical to recognizing why certain populations are disproportionately affected by disasters. The United Nations Office for Disaster Risk Reduction (UNDRR, 2023) defines vulnerability as conditions shaped by physical, social,



economic, and environmental factors that heighten risk. This framework highlights the importance of culturally attuned approaches to disaster risk reduction. The devastating effects of the 6 February 2023 Maraş-Hatay earthquakes reaffirm the need to address vulnerability in disaster preparedness.

These events, alongside the enduring trauma of the 1999 Marmara earthquake and ongoing perceptions of risk, heightened societal anxiety about future earthquakes. They also exposed systemic shortcomings in resource allocation, community inclusion, and infrastructure resilience. A lack of institutional coordination and insufficient integration of local needs further exacerbated vulnerabilities, as seen in the aftermath of the disaster. As Altıntaş (2012) and Özer (2017) argue, post-disaster urban transformation projects have sometimes exacerbated societal mistrust and heightened perceptions of insecurity.

Social constructs significantly influence disaster resilience and vulnerability. Resilience, as a key outcome of sustainable practices, emphasizes a community's ability to adapt and recover. Kendra, Clay & Gill (2018) describe resilience as both a "transformative recovery" and an "adaptive force." Social capital, rooted in cultural practices, strengthens resilience by fostering cooperation, resource sharing, and adaptability during crises (Aguirre et al., 2005; Novikova et al., 2023; Aldrich, 2012). As defined by Putnam (1995) and Woolcock (2001), social capital operates through bonding within close-knit groups, bridging diverse communities, and linking individuals to institutional resources, such as government agencies or NGOs, facilitating collective action and sustainable recovery. Cooke and Kothari (2001) emphasize that participatory development, by involving local communities, ensures context-specific and inclusive recovery strategies, fostering long-term empowerment.

In this context, sustainability plays a vital role in mitigating disaster risks by integrating the "environment, economy and society" (Theis & Tomkin, 2015: 6). By addressing the underlying social, economic, and environmental vulnerabilities, sustainable development enhances disaster resilience. Stable infrastructure and equitable urban planning are critical components of this approach, ensuring that risk-reduction measures are both effective and culturally relevant. To reduce vulnerabilities and build resilience, Türkiye must adopt a coordinated and inclusive disaster management strategy that leverages social capital, fosters trust and collaboration, and incorporates international best practices to guide the development of resilient and sustainable communities.

### **Rebuilding Business Life After Earthquakes**

Earthquakes severely disrupt societies and economies, profoundly impacting business continuity and working life. Effective recovery requires a human-centred approach to public management that prioritizes resilience and collaboration, safeguards critical infrastructure, promotes resource sharing, and fosters disaster awareness and risk reduction (Webb, 2018; Şengün, 2007; Varol & Kırıkçaya, 2017; Erkan et al., 2015). Antakya's historical infrastructure and multi-ethnic composition require inclusive strategies for sustainable economic recovery.

Sustainable business practices play a crucial role in post-disaster recovery. Griggs et al. (2013) emphasize that aligning with Sustainable Development Goals (SDGs) fosters economic stability and environmental health, addressing present challenges and preventing future vulnerabilities. Small and medium enterprises (SMEs), which constitute 99.7% of Turkish businesses (TÜİK, 2022), face significant post-disaster challenges such as limited financing. Tierney (2007: 294) identifies this as the “liability of smallness,” making SMEs particularly vulnerable, a reality echoed in studies on flood disasters in Bangladesh (Sharif, 2021) and Malaysia (Taib & Jaharuddin, 2019).

Effective recovery frameworks integrate risk management, resilience awareness, and collaborative efforts. Public-private initiatives, community-driven programs, and partnerships with NGOs enhance stability (Pisano, 2012; Peeling, 2003). Global models like the Sendai Framework’s “Build Back Better” approach emphasize the importance of resilient infrastructure (Cosson, 2020: 2). Inclusive development, fostering social connections, equal legal protections, and strong social networks (Narayan, 1999), is essential for achieving sustainable recovery. By building resilient businesses and fostering inclusive practices, communities can secure long-term financial and social stability. This need for inclusive development and resilient recovery is especially critical in Antakya, a city located on Türkiye’s southern border with Syria, where economic instability, regional disparities, and the aftermath of the earthquake are compounded by the complexities of the ongoing Syrian conflict. Building on the theoretical framework of resilience, sustainability, and business recovery in disaster settings, the following findings explore the real-world challenges faced by Antakya’s workforce and business community in the aftermath of the disaster.

### **Work life and business adaptation in Antakya post-earthquake**

Similar to other cities in Türkiye, small businesses play a crucial role in Antakya’s economy. However, both small businesses and larger enterprises in industrial areas have been severely impacted by the earthquake (Ministry of Industry and Technology of the Republic of Türkiye, 2023), with many reporting staff shortages and reduced operational capacity due to outward migration (Yeni Şafak, 2023). This migration has put them at a competitive disadvantage compared to businesses in other cities. Despite these challenges, larger enterprises have recovered more quickly than small-scale businesses, either by establishing new industrial zones or leveraging their available capital. Fatih (P1) explained the situation of large-scale enterprises as follows:

In Antakya, there used to be several key industrial sectors, such as shoemaking, furniture, and leatherwork. Now, some of the shoe factories have moved to Reyhanlı (a town neighbouring Antakya) because their manufacturing places were completely destroyed. Currently, unskilled Syrian labourers constitute the largest workforce here. The biggest challenge right now is the lack of skilled and qualified craftsmen and personnel for existing businesses. For instance, a skilled shoemaker in Istanbul earns up to 50,000 TL in salary. The shoemaking industry has mostly left Antakya. It used

to be the first in Türkiye, but now it's fourth or fifth (...) The furniture sector is more fortunate; it has moved to a new furniture site in a village of Antakya (...) The primary export industry here is fresh fruits and vegetables. Exporters haven't faced major issues; their warehouses have suffered minor damage. However, there are few farmers left who produce. There is a problem with production. Agricultural workers are also in a difficult situation. If they have no home or land, how can they stay and work here? (P1).

Highly educated individuals and professionals from the middle or upper classes have faced significant losses due to the earthquake. Some have relocated to other cities, while others strive to continue their work with reduced budgets. The extent of financial loss varies widely, influencing their resilience strategies based on the capital they have retained. Narratives by Kazım (P10) and Ali (P17) illustrate this variability through their experiences:

My architecture firm was operating in Antakya, but the main office and commercial branch structures were severely damaged and demolished. This disruption led to the complete loss of our work environment. Since the office has moved to the homes of the remaining partners, we now only accept design projects and have exited from construction and material sales. Our revenue has plummeted from 50 million TL to just 200,000 TL. (P10)

While Kazım's story illustrates the significant financial loss faced by many professionals, Ali's experience demonstrates how family support can be essential in managing such difficulties.

I had a three-story shop in the industrial area selling machine spare parts, but it collapsed. My house was demolished too (...) My spouse and I hurried to collect the remaining parts until sunset. We loaded them into a truck and transported them to a warehouse in our village. Thankfully, my father-in-law and sister-in-law helped me rent a truck. Had I waited for the bank's assistance, I would have lost everything—most of my inventory was already stolen. Then, I purchased a container to establish a temporary workspace. I had some capital, which allowed me to construct a steel-structured building to replace the shop. I managed to continue my business; of course, we have a significant loss. (Ali, P17)

Renderings by Kazım and Ali exemplify the drastic downsizing of their businesses due to the losses they incurred during the earthquake. Despite these hardships, Ali's access to family support networks signifies the importance of family-based resilience. Both financial capital and bonding capital—whether they are short- or long-term—strengthen economic resilience. His relatives' assistance with tasks like transporting goods illustrates how bonding capital can bolster economic recovery. In contrast, Aslı, despite having similar social bonds, describes the complete financial loss in the following manner:

We had a well-functioning hotel that I ran with my son. We lost everything; our business and home are gone. I had some savings, so I bought a new house with what remained. Now, I only have my pension, which we live on (...) My relatives also lost their homes, so we all live together. (Aslı, P14)

The survivors I interviewed revealed that while some participants strived to maintain their professions, others, unable to find work, either stayed at home or opted for retirement. Additionally, many earthquake survivors with financial means sought refuge in other provinces during the winter months to minimize the health risks posed by post-earthquake conditions and to find solutions for their children's educational needs. Those who could secure essential jobs stayed in the region, while many skilled workers found living and working conditions inadequate and thus, they decided to relocate themselves in other locations.

Some business owners had no choice but to relocate their enterprises to nearby towns. For example, Hülya (P15), who operated a water shop with her husband, explained, "After the earthquake destroyed our shop and home in Antakya, we had to build a storage unit in my garden and move our business there." Similarly, Lale (P20), who assists her husband in a textile shop, opened an alternative shop under her house, which also allows her to watch over her children. On the other hand, Taner (P16), who once operated a small art studio in Antakya, shared that he no longer has the means to open another studio. Ümit (P18), a grocer and unemployed teacher, reopened a small grocery store just outside Antakya but says, "If I pay the excessive rent they are asking, based on the rate charged to a nearby chain supermarket, I won't make any profit and might be forced to close down."

Amid the ruined city, only the damaged but resilient principal marketplace remains. It consists of three crosscutting narrow streets. Some business owners managed to pay rent or repair their shops to continue operating. Some sales assistants had been in such positions before the earthquake, while some had started working for others as sales assistants after losing their shops. The market traders described the near impossibility of finding workers for skilled jobs and how challenging it was – and still is – to keep their businesses running as well as the many obstacles they continually face. Ahmet explains the challenges of reopening the market in unsafe conditions, illustrating how artisans are relying on their own efforts to persevere.

This market is the only one still standing. There was no institutional initiative to reopen it. People with capital said, 'We will open our shops here.' At first, there was no security here. Every evening, we would gather our goods and leave. For example, spices were more expensive than jewellery stores. Now, there are police and guards at night, making it safer. This happened through the strength of the community, the unity of the merchants, and their determination. Of course, there was fear. You restart by borrowing money. Will you be able to repay that debt? You could end up embarrassed, lose what you have, or accumulate significant debt. The merchants took a big risk to rebuild the market. (Lale, P2)

Ahmet strongly emphasized that the shopping district (*çarşı*, the traditional marketplace, where local goods, services, and trades are exchanged) "evoke continuity." This continuity, for him, became crucial for the sustainability of urban life, as the historic market serves as the engine for the complex socio-cultural dynamics of Antakya. It is embedded in the daily lives of working people with

dynamic business interactions, promoting interethnic and intercultural exchange among diverse communities (Doğruel, 2005).

However, many residents living outside the city faces economic challenges that compel them to seek work in urban businesses. They often reside in sturdy houses, container cities, or tents, striving to make a living through various jobs in others' businesses. Participants reveal how precarious the continuity of work life is under disaster conditions, with job security always uncertain. This precariousness undermines efforts to start new businesses and threatens the sustainability of existing ones. For example, Canan (P4) describes the difficulties of transitioning from running her own business to being unemployed.

Previously, my brother and I had rented a kebab shop near the city centre, which we were running together. I had invested my savings, which I accumulated from baking and selling bread in the *tandır* [a traditional oven], into that shop. With the earthquake, the shop was destroyed, my capital disappeared. My brother then opened a new shop in Defne town, and I assisted him with it. Unfortunately, this kebab shop also did not succeed; it was insufficient to cover both our living expenses and the rent. He closed it down and started setting up a stall on the sidewalk to sell fruits and vegetables. Now, I am unemployed and have no savings left. (P4)

This financial instability extends beyond economic loss, as it often triggers psychological distress. Mustafa (P5) emphasizes the stress of working for others after losing his own business:

Our house collapsed in the earthquake. I was trapped under the rubble for three days (...) I had a shoe shop in the market, but it was destroyed, and I couldn't salvage any goods from it. There was also looting (...). Psychologically, it affected me deeply because I used to enjoy working in my own store, earning money. Working for others stresses you out inevitably; if customers don't come, you stress, thinking the shop might not make money, or there might be misunderstandings. (P3)

These economic challenges contribute to broader social tensions, particularly within families. Scholars such as Kalaycıoğlu (2018), Şengün (2007), Guo & Matsuda (2023), and Hewitt (2016) have observed that disasters reshape living arrangements and influence gender norms, exacerbating stress and uncertainty. Mustafa (P5) connects these issues to family dynamics:

Divorce has increased. Everyone is stressed, everyone is experiencing issues with their spouses, and privacy is non-existent, causing frequent conflicts. Children's discipline is deteriorating. Living in close quarters without choosing neighbours impacts their education negatively. (P5)

Similarly, Seval (P3) emphasizes the psychological toll of living in temporary housing:

Living in containers or tents without work leads to stress, tearing families apart. Economic struggles and helplessness increase domestic conflicts and violence against women. (P3)

These testimonies reveal the interconnectedness of economic hardships, psychological stress, and shifting family dynamics. Participants' experiences demonstrate how disaster conditions challenge traditional gender roles and social cohesion, intensifying domestic tensions. As economic deprivation persists, these pressures manifest in heightened family conflicts, sometimes escalating into fatal violence. Such findings emphasize the urgent need for targeted interventions to address both immediate survival needs and long-term social stability in post-disaster recovery efforts.

In these constrained circumstances, both men and women face difficulties in fulfilling the expectations imposed by gender norms. Here, the economic deprivation that prevents them from improving their living conditions is significant. Everyone needs help, but no one can provide it as each is dealing with their own issues. The focus is on short-term survival needs, but these conditions are not changing. When people lose hope, they inevitably direct their stress towards one another. Incidents of fatal violence began to make headlines in container cities (Milliyet, 2023).

Earthquake survivors face a relentless battle for survival amidst immense challenges such as trauma, loss of life, illnesses, caregiving responsibilities, and emotional burdens. They endure both material and spiritual devastation in the aftermath of the earthquake, as evidenced by disaster studies (Murakami, Takebayashi, Ono, Kubota & Tsubokura, 2020; Nagai, Hikichi, Shiba, Kondo, Kawachi and Aida, 2022). Economic hardship exacerbates their anxieties and deepens their sense of helplessness as also reflected in Kenan's (P8) narrative:

We had to leave immediately after the earthquake. Winter conditions were harsh, and the children had school. First, we tried to rescue my mother and brothers from the rubble. We saved my injured brother and his wife alive but unfortunately retrieved my deceased mother and nieces three days later from under the rubble. Before the earthquake, I ran a school bus service in winter and sold ice cream in summers (...) We moved to Ankara and shared a house with my other siblings, three families together. I couldn't find work there. When summer came, we returned home. My house had minor damage. In summer, I resumed making ice cream. That's how we are trying to get by. But it's not enough, of course (...) We are in a state of financial and emotional collapse. (P8)

After any disaster – as well in the earthquake in Antakya – “it is not only the buildings and infrastructure that collapse, but also the economic system” (Şengün, 2007: 49). In the wake of the earthquake, survivors are battling immense challenges. Many strive to keep their businesses or jobs afloat despite these obstacles. Yet, the resilience demonstrated by those in the ‘Çarşı’ marketplace illustrates the broader determination of city dwellers to rebuild while grappling with ongoing struggles for economic stability and emotional recovery. In this context, the necessity for institutional support for the ‘awareness of resilience’ among city dwellers (McManus et al., 2008) within structured resilience-building frameworks becomes evident. To facilitate this recovery and enhance the well-being of earthquake victims, it is essential to address financial constraints and develop adaptive resilience measures that consider evolving socioeconomic and natural conditions (Ishiwatari, 2020; Tachiya, 2015). Therefore, comprehensive planning and support are vital for the recovery of affected communities.



### **Challenges of sustainability in work life**

Natural disasters strikingly reinforce vulnerabilities among marginalized populations like the poor, minority groups, women, and the elderly, exacerbating existing social inequalities (Aldrich, 2010; Bacon & Hobson, 2014; Novikova et al., 2023). Access to economic security remains unequal, even in affluent countries, stratifying vulnerability (Tierney et al., 2001). Pre-existing economic insecurities intensify the financial impacts of disasters, particularly in economically unstable regions (Duignan, 2013; Hobson, 2014). In Türkiye, where a significant portion of the population is already impoverished and experiencing economic stagnation, Antakya's economic decline as a result of the Syrian war has further exacerbated this situation.

An exploration of post-earthquake sustainability in working life encompasses various dimensions, including workplace recovery, crisis management, business strategies for damage mitigation, infrastructure improvements, social solidarity, and support for business reconstruction from family, institutions, and NGOs, all of which impact continuity. This inquiry also investigates whether the earthquake disaster instilled feelings of uncertainty and anxiety in participants' professional lives, as well as the financial threats they faced in the aftermath. Antakya's infrastructure and superstructure issues contribute to significant uncertainties in future planning, compounding economic devastation and stress. Challenges in sustaining work arise from regional policy uncertainty, including "reserved area policies," which create fear of potential future losses of homes or businesses due to unpredictable policies in the near or distant future. According to the decision made by the Council of Ministers under the Law No. 7471 on the Transformation of Areas at Risk of Disasters, published in the Official Gazette dated 9 November 9 2023 and numbered 32364, areas determined by the Ministry can be designated as 'reserved construction areas' (Official Gazette, 2023). Following this decision, people worry about the fate of their homes and shops that were demolished or destroyed by the earthquake, as well as their remaining properties.

Seval (P3) and her husband Mahmut (P6) encountered significant challenges after the earthquake, including housing instability, financial hardships, and health issues. They relocated multiple times, faced difficulties finding work, and coped with emotional hardships. They express their experiences in the following manner:

Our house was heavily damaged in the earthquake, we could hardly get out of the house, the wall fell on my daughter's foot, her leg was broken. We moved to Mersin. We looked for a job there for a few months. I babysat for a while. My husband was sick, he has a chronic disease. Then we came back here and stayed in a tent with my father for 3 months. I asked for a container, but nothing came of it (...) We lost a lot. It had been only 4 months since we bought our new house, it is now demolished. We had sold our old house and car for that. (...) My daughter and son are in university. At first, they worked and supported us for a few months. We rented a house outside Antakya." (P3)

Seval (P3) also emphasizes the vital role of family solidarity as an essential element of social capital, which has become crucial for getting by—even if it means being hosted in a tent. We also see how roles shift over time, with children stepping up to support their parents as they struggle



to cope with the earthquake's impact. Both Seval and Yasemin (P7) discuss their efforts to restart their businesses amid uncertainty and economic challenges, facing high rent, inconsistent income, and damaged infrastructure that undermine their financial stability. Though they have set up temporary workspaces, they continue to grapple with these financial pressures and difficult working conditions. Though they have set up temporary workspaces, they continue to grapple with financial pressures and difficult working conditions. As one shop owner describes:

At first, there was nowhere to shop, and dust was everywhere. We cleaned what we could save. We had opened the shop only three months before the earthquake. The shop owner was helpful with the rent, but some doubled it. Everything operates on debt. I buy supplies with debt. We are under economic pressure. Unemployment is high, and nobody wants to hire. Every day, many job seekers ask if there is a job. When it rains, the shop floods, and the furniture gets damaged. Although the shop is heavily damaged, we continue to work. A huge piece of debris fell on my husband. I spent 40-50 thousand liras on renovations. You cannot plan for anything; we don't know what will happen tomorrow. Now they are telling us the shops will all be demolished. What will I do if they evict me tomorrow? Everything is uncertain. (P3)

Despite setting up temporary workspaces, business owners continue to face severe economic and operational challenges. As one respondent describes the struggle to maintain stability is compounded by financial pressures, uncertainty about the future, and the ongoing need to rebuild amidst the devastation.

My large store was destroyed. I spent the winter in Mersin, setting up stalls at fairs. I recently rented a small shop here, but the rent consumes my entire income; it's not sustainable. I stay at my grandparents' place to save on rent. My husband, normally a shoemaker, took up electrical and painting jobs. There's no time to rest. I salvaged what I could from my old shop's debris; merchants feared bringing in new stock. With Eid approaching and assurances that the market wouldn't collapse, we cautiously resumed stocking. My husband insists on leaving; he says there's no future here. It's like the feeling of routine is somewhat lost. I'm doing this today, but I don't know what will happen tomorrow. (P7)

Seval's (P3) and Yasemin's (P7) experiences illustrate how sustainability is threatened not only by physical loss but also by prolonged economic and psychological strain. Yasemin's remark about having "no time to rest" indicates a shift from career continuity to simply "getting by" day by day. Yet, despite constant pressures, both women demonstrate remarkable resilience, pushing forward amid instability. On the other hand, Yasemin describes the collaborative spirit among shopkeepers, emphasizing how their support and cooperation enable them to offer a diverse range of products, allowing customers to fulfil all their needs in one visit. This collaboration enhances the resilience of the marketplace. Ultimately, their stories reveal the larger economic struggles that families face as they work to rebuild and adapt in such a precarious environment:

My shop's upper floor leaks in the rain, causing significant damage. Merchants here support each other, rebuilding independently (...) They'll temporarily move the

merchants who own a shop at the Long Market (*Uzun Çarşı*) to new container shops built at the head of the bridge this place might be demolished within a year. Yet, container shops aren't viable for business. In our market all merchants benefit when customers buy various goods. For example, when a customer comes to buy cheese, they may also end up buying shoes if they need them. (P7)

Although signs of community solidarity and mutual aid are present, as Yasemin notes, not everyone benefits from them. These efforts remain insufficient in the absence of institutional support, as container shops and temporary solutions fail to offer long-term stability. Adnan (P9) is unable to rent or purchase new items because the earthquake demolished his business. Once a shop owner, he now works as a street vendor, selling inexpensive products like plastic children's toys, insulated bands, and razors from a dust-covered stall. When I asked him about his future plans, he expressed little hope for any expectations. Given these challenging financial conditions, living in an apartment with his married siblings, he feels that envisioning a future that includes marriage is simply out of reach.

I used to have a shop in a passage in the market. Three months after the earthquake, the building had not yet collapsed, so we took out the goods. Now, I sell toys and items at the stand (...) I'm single, staying in a house outside Antakya with my siblings, trying to help my family (...) There's no recovery, business is very slow, it's bad (...) I can't buy new goods to replace the old ones. When the shops collapsed, I couldn't get a new one. The shop was mine. They built prefab shops here, but the shoe sellers from the long market are coming here. There's no plan for us. Everyone is trying to find individual solutions. The rich went to Adana and Mersin; those with no assets continue to struggle here. (P9)

The earthquake devastated both wealthy and poor people indiscriminately. Interestingly, while some old, seemingly fragile buildings withstood the impact, newer and more opulent buildings – supposedly built to code – collapsed. However, as many scholars highlight (Aldrich, 2010; Bacon and Hobson, 2014; Tierney et al., 2001), post-disaster recovery mechanisms tend to disadvantage the less privileged.

Many people who are impoverished or who have lost their assets find it difficult to recover without support. They lack bridging, bonding, or linking capital (Bourdieu & Wacquant, 1992; Putnam, 1995; Woolcock, 2001) essential for effective assistance and in this regard, institutional support appears notably insufficient. In Adnan's (P9) case, since his shop was in a building outside the traditional market, he remains without guidance or hope regarding what will happen to the structure that housed his business. He had an asset that has now vanished, with little prospect of restoration.

Many youths in Antakya echo this sentiment, expressing a sense of disillusionment. Sinan (P19) a university student, remarked that “most young people are seriously feeling lost in Antakya. The environment is very suffocating. The city's old social structure is gone.” He explained that many young people in the centre of Antakya have also found little job availability, with those employed turning to neighbouring towns that are in better condition and seeking work outside the city. He expressed the change in Antakya: “In the past, there were many butchers and spice shops in the market, and a lot of friends

were apprenticing in cafes and restaurants... but now they are gone... if you get a job somewhere, you will earn below the minimum wage, and you won't have insurance." This statement reflects the stark reality many young people face, feeling trapped in a stagnant environment and unable to find meaningful employment. The departure of youth from the city reflects broader economic challenges and a potential shift in the labour force due to delays in implementing lasting sustainability measures, which gradually may alter the demographic landscape.

Nurhan's words (P12) also exemplify this struggle, facing financial and emotional hardship and limited opportunities, much like many other residents in the aftermath of the disaster. She returned to her family's house after divorcing and moved into the basement because she couldn't afford to reopen her hair salon under current economic conditions. During the earthquake, her house collapsed, trapping her only brother, uncle, and cousins under the rubble along with her salon income and car. Now, she has set up a makeshift canopy between two tents in a neighbour's empty yard, earning money by doing women's hair outdoors and carrying jerry cans of water for washing. Because of these hardships, her mother suffers from a serious heart condition and an infection that has swollen her leg like a drum, while her sister battles cancer. Nurhan (P12) needs a supportive living environment and financial support to continue her work, including persuading her mother – who refuses treatment and wishes to die – to seek medical care, and frequently taking her sister to Adana for a check-up.

Nazan's (P10) story exemplifies the struggles of a single-parent family striving to stay afloat amidst challenging circumstances. Like Adnan and many other city dwellers, she appears to have little hope for the future beyond surviving day-to-day. This situation not only affects her but also has significant implications for her daughters' futures. The risk of intergenerational poverty is evident, as the cycle of deprivation could extend to the next generation, impacting many urban residents facing similar challenges.

I reluctantly commute to work. I used to leave home eagerly. Now everyone around lives in tents, leading unhappy lives. Life has become difficult for women in my vicinity, affecting everyone's mental health. Before the earthquake, I lost my husband to a heart attack. I am fighting alongside my daughters; one is in high school, the other works as a hairdresser (...) We strive to stay on our feet. Job loss and fear of not finding work have always been present. Unemployment is a reality. No one is hiring anymore; everyone is on their own. Now, employers need to work themselves to be able to hire others, and it's crucial to understand them too. I live in a rented place. It's very difficult to make ends meet (...) Can I afford to educate my daughter? Only time will tell. We leave it to fate. (P10)

Nazan (P10) continues by expressing how challenging working conditions can be for women. The collapse of public transportation systems, along with long distances, loss of relatives, inadequate wages, and a lack of job opportunities, significantly discourages women from working in the market, where the number of female workers is typically limited to just five or six.

I'm leaving work late. I can't find transportation. Initially, there was none; now, it runs every hour until 7, but I can't catch it, so I walk back and forth. It takes about half an hour. The road is empty. Naturally, I'm scared, but there's nothing I can do. It's exhausting; I'm on my feet all day. (P10)

On the other hand, the inability of women to leave behind their dependent children, elderly, and sick parents, even when unemployed and without money, poses challenges to sustaining their jobs. This shift has notably increased household chores and caregiving burdens for women, creating a double disadvantage for those seeking employment.

I used to work in a restaurant, uninsured, in the kitchen. When everything fell apart in Antakya, there were no jobs left (...) I can't leave; someone suggested working in a resort town. My brothers took their families to other cities. I stayed behind. I can't leave my mother. It's suffocating economically and psychologically. Maybe if my old workplace reopens, I can work part-time." (Nuray, R15)

This personal account reflects the deep emotional and economic struggles faced by women, particularly in balancing caregiving responsibilities with the need to earn a livelihood. Similarly, other participants describe how the combined challenges of caregiving and economic instability have forced them into difficult situations.

I am a primary school teacher with two children. My husband works in Saudi Arabia. While my house didn't collapse, my parents' and in-laws' did, so they now live with me (...) I couldn't secure a government school position. Before the earthquake, I was earning money through private lessons. Now, there's no demand for lessons. I'm tied at home caring for children, elderly, and a disabled sibling. If I don't care for them, who will? (...) My husband planned to return from Saudi Arabia after saving, but now it's impossible; we live apart. Many families face this situation, with women and children here while husbands work abroad. Survival depends on foreign sources of income, but feeding and caring for everyone is challenging. (P11)

The participants have identified various barriers to sustainability both in their professional life and daily life. The collapsed infrastructure, the absence of the city centre, the insufficient transportation for linking towns to the city centre, the failure to fairly reconstruct the market and the connecting towns. These barriers combined with people's traumas, illnesses, and poverty dim hopes and the sustainability of the future. The residents' volatile feelings are exacerbated by the lack of clarity on city restructuring, as Fatih (P1), a merchant carrying on a family business, points out:

Previously, within a 1 km radius of the market centre, there were around 5,000 shops. Now, they don't exceed 200-250, some are badly damaged or operating in containers (...) There is tremendous sense of uncertainty about our future. With all buildings collapsed, these 'reserve areas' could become significant social problems, potentially disrupting Hatay's future peace as people try to profit from properties inherited from their ancestors. There are concerns over the collapse of 150-200 shops in the market which poses a major threat. This means I am abandoning 85% of the development plans; let's develop 50-60%, let's evacuate. (P1)

Participants reported discontent with their current working and living conditions and crisis management, emphasizing uncertainty about the future and their consequent feelings of hopelessness and unhappiness, all of which are indicative of diminished well-being. Uncertainty keeps people in the liminal situations often observed after earthquakes, diminishing city dwellers' resilience.

Where will my shop be in the new restructuring? What will the cost be? Will they offer the same place, or will it be somewhere else? How will I make a living? I don't know the answers to these questions. Suppose I retire with an 11,000 TL pension. There is a lot of uncertainty. Decisions change very frequently (...) Only historical sites like Habibi Neccar, the Orthodox Church, and the Great Mosque are somehow being granted zoning. Even the worst program is better than no program. If we could see a way forward, we wouldn't experience this hopelessness and stress. It also disrupts our living standards. May God help and assist us. (P1)

Later, in another conversation, Fatih (P1) noted that the situation had evolved, with authorities showing greater determination to repair the marketplace, though it could take up to five years, while rebuilding the entire city might require at least a decade. However, he emphasized ongoing uncertainty over who would regain ownership or acquire new shops in the process and noted that, Despite repeated inquiries from shop owners, the authorities kept the current zoning plan undisclosed and did not share it with citizens in an objective or transparent manner.

The experiences of Antakya residents illustrate how both financial resilience (Ishiwatari, 2020) and community cooperation are essential yet strained amidst post-disaster uncertainties. Residents face increased vulnerabilities as bureaucratic delays and infrastructure challenges impact their livelihoods; this signifies the necessity for resilience efforts in the built environment to be closely aligned with community-centred support system (Webb, 2018; Griggs, et al., 2013). These systemic failures in planning have intensified individual burdens and left residents disempowered without a clear recovery framework. "To further democratize access to information" (Kasapoğlu, 2024: 21) transparency is essential.

Comprehensive regional planning is essential for improving disaster management effectiveness and resilience (Özden, 2007). The plan must adapt to accommodate diverse regional conditions, and the specific risks associated with earthquakes. While volunteers— including scientists, architects, and urban planners—are working within NGOs to rebuild Antakya authentically, it remains uncertain whether the government will choose to cooperate with them. Financial and social capital, as well as targeted employment assistance, are pivotal for fostering post-disaster resilience (Murakami et al., 2020; Aldrich, 2010), as financial constraints and instability significantly affect survivor well-being (Tachiya, 2015; Marmot & Wilkinson, 2005). Addressing these systemic gaps is crucial to restoring health, safety, and resilience, emphasizing that the people of Antakya urgently need attention and care.

## Conclusion

This study explored the financial survival strategies and work-life challenges faced by earthquake survivors in Antakya, emphasizing how these struggles reshape urban demographics and household dynamics. Post-disaster uncertainty, exacerbated by human actions, deepens social strain and emotional hardship. Effective recovery efforts must address both the economic and social dimensions of these challenges, focusing not only on physical reconstruction but also on rebuilding social cohesion and cultural resilience.

Financial disruption also has a gender dimension, as women face additional hardships, such as forced exits from the workforce and increased caregiving responsibilities. Recovery measures should prioritize the creation of diversified income opportunities, job retraining programs, and facilitating women's reintegration into the workforce. Strengthening infrastructure and expanding family care support systems will help stabilize households and contribute to economic revitalization.

The mass migration of approximately 100,000 people from Antakya has exacerbated already inadequate living conditions, severely affecting key economic sectors like small businesses and agriculture. Rebuilding public spaces, particularly traditional markets, is essential for restoring community cohesion and supporting economic activity. Equally important is addressing the risks of expropriation faced by residents in "reserved construction zones," ensuring long-term sustainability and preventing further displacement.

A sustainable recovery for Antakya must balance rebuilding physical infrastructure with preserving the city's cultural identity, which is deeply rooted in its multi-ethnic diversity and historic marketplaces. Traditional marketplace has long served as venues for ethnic communities to connect, strengthening their bonding and bridging capital, expanding networks, and promoting inter-ethnic cohabitation. In this context, restoring these spaces requires policies that protect heritage, reinforce community ties, and encourage intercultural exchange. Such efforts will not only safeguard civic cohesion but also support vulnerable populations and promote social equity.

Recovery efforts must involve an inclusive process with active local participation and transparent government communication. Inspired by successful models like Japan, a comprehensive framework should streamline efforts, prioritize small business revitalization through loans and grants, and emphasize earthquake-resistant infrastructure. Additionally, policies that encourage displaced residents to return and rebuild their homes and businesses will foster regeneration.

Gender-sensitive policies are crucial for ensuring women's active participation in recovery. Providing women with access to vocational training, entrepreneurship programs, and diversified income opportunities will enable their involvement in the rebuilding process. Additionally, addressing the educational needs of children and youth, as well as the social and medical challenges faced by the elderly, should be prioritized. Offering childcare facilities and flexible training options will help women re-enter the workforce while balancing caregiving responsibilities.

Future research should examine the long-term effects of recovery interventions on social cohesion, urban regeneration, and economic resilience. Key areas of exploration include migration's impact on community rebuilding, the effectiveness of gender-specific recovery policies, and the integration of cultural heritage preservation into urban planning. Interdisciplinary collaboration among urban planners, economists, social scientists, and public health experts will be crucial for developing integrated recovery strategies.

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## References

- Aguirre, B. E., Dynes, R. R., Kendra, J. & Connel, R. (2005). Institutional resilience and disaster planning for new hazards: insights from hospitals. *Journal of Homeland Security and Emergency Management*, 2(2), Article 1. <https://doi.org/10.2202/1547-7355.1156>
- Aldrich, D. P. (2010). The power of people: Social capital's role in recovery from the 1995 Kobe earthquake. *Natural Hazards*, 56(3), 595–611. <https://doi.org/10.1007/s11069-010-9492-5>
- Aldrich, D. P. (2012). *Building resilience: Social capital in post-disaster recovery*. University of Chicago Press.
- Bacon, P. & Hobson, C. (Eds.). (2014). *Human security comes home: Responding to Japan's triple disaster*. Routledge, pp. 1–22.
- Bourdieu, P. & Wacquant, L. J. D. (1992). *An invitation to reflexive sociology*. University of Chicago Press.
- Xu, B. & Lo, M. M. (2022). Toward a cultural sociology of disaster: Introduction. *Poetics*, 93, 101682. <https://doi.org/10.1016/j.poetic.2022.101682>
- Cooke, B., & Kothari, U. (Eds.). (2001). *Participation: The new tyranny?*. Zed Books.
- Cosson, C. (2020). "Build back better": Between public policy and local implementation, the challenges in Tohoku's reconstruction. *Architecture and Urban Planning*, 16(1), 1–4. <https://doi.org/10.2478/aup-2020-0001>
- Cresswell, T. (2013). *Geographic thought: a critical introduction*. Wiley-Blackwell.



- Doğruel, F. (2005). *Hatay'da çoketnili ortak yaşam kültürü: "İnsanîyetleri benzer..."*. İletişim Yayınları.
- Duignan, R. (2013). Has 11 March 2011 ushered in a new sense of fiscal responsibility? In D. Al-Badri and G. Berends (Eds.), *After the Great East Japan Earthquake: Political and policy change in post-Fukushima Japan* (pp. 67-88). NIAS Press.
- Erkan, B. B., Karancı, A. N., Kalaycıoğlu, S., Özden, A. T., Çalışkan, I., & Özakşehir, G. (2015). From emergency response to recovery: Multiple impacts and lessons learned from the 2011 Van earthquakes. *Earthquake Spectra*, 31(1), 527-540.
- Griggs, D., Stafford-Smith, M., Gaffney, O., Rockström, J., Öhman, M. C., Shyamsundar, P. & Noble, I. (2013). Sustainable development goals for people and planet. *Nature*, 495(7441), 305–307. <https://doi.org/10.1038/495305a>
- Guo, Y. & Matsuda, T. (2023). Study on the multi-criteria location decision of wide-area distribution centers in pre-disaster: Case of an earthquake in the Kanto district of Japan. *Asian Transport Studies*. <https://doi.org/10.22260/ATS.2023.01.01>
- Hewitt, K. (2016). Foreword. In E. Enarson and B. Pease (Eds.) *Men, masculinities and disaster* Routledge, pp. xvii-xxi.
- Ishiwatari, M. (2020). Evolving concept of resilience: Soft measures of flood risk management in Japan. *Connections QJ*, 19(3), 99–107. <https://doi.org/10.11610/Connections.19.3.07>
- Kasapoğlu, A. (2024). Analysis of the 6 February 2023 Turkey earthquake as a challenge in disaster sociology under the guidance of Bruno Latour and Terrestrial. *Journal of Infrastructure, Policy and Development*, 8(8), 6382. <https://doi.org/10.24294/jipd.v8i8.6382>
- Kendra, J. M., Clay, L. A. & Gill, K. B. (2018). Resilience and disasters: Social capital in disaster research. In H. Rodriguez, W. Donner & J. E. Trainor (Eds.) *Handbook of disaster research*. Springer, pp: 87-108.
- Marmot, M. & Wilkinson, R. (Eds.). (2005). *Social determinants of health*. Oxford University Press.
- McManus, S., Seville, E., Vargo, J. & Brunson, D. (2008). Facilitated process for improving organizational resilience. *Natural Hazards Review*, 9(2), 81–90. [https://doi.org/10.1061/\(ASCE\)1527-6988\(2008\)9:2\(81\)](https://doi.org/10.1061/(ASCE)1527-6988(2008)9:2(81))
- Merriam, S. B. (2009). *Qualitative research: a guide to design and implementation*. John Wiley & Sons.
- Meyer, M. A. (2018). Social capital in disaster research. In H. Rodriguez, W. Donner and J. E. Trainor (Eds.), *Handbook of disaster research* Springer. pp: 263-288.
- Milliyet. (7 November 2023). Konteyner kentte korkunç olay: Kayınbiraderini öldürüp eşini ağır yaraladı. <https://www.milliyet.com.tr/gundem/konteyner-kentte-korkunc-olay-kayinbiraderini-oldurup-esini-agir-yaraladi-7042566>
- Ministry of Industry and Technology of the Republic of Türkiye. (2023). *Deprem bölgelerinde sanayi yeniden canlanacak*. <https://www.sanayi.gov.tr/medya/haber/deprem-bolgelerinde-sanayi-yeniden-canlanacak>
- Murakami, M., Takebayashi, Y., Ono, K., Kubota, A. & Tsubokura, M. (2020). The decision to return home and well-being after the Fukushima disaster. *International Journal of Disaster Risk Reduction*, 47, 101538. <https://doi.org/10.1016/j.ijdr.2020.101538>
- Nagai, M., Hikichi, H., Shiba, K., Kondo, K., Kawachi, I. and Aida, J. (2022). Long-term trend in the association between disaster damage and happiness before and after the Great East Japan Earthquake. *International Journal of Public Health*, 67, 1604901. <https://doi.org/10.3389/ijph.2022.1604901>

- Narayan, D. (1999). Bonds and bridges: social capital and poverty (*Policy Research Working Paper 2167*). The World Bank. <https://doi.org/10.1596/0-8213-4526-1>
- Neuman, W. L. (2014). *Social research methods: qualitative and quantitative approaches*. Pearson.
- Novikova, N., Gerster, J and Hartwig, M. G. (Eds.). (2023). *Japan's triple disaster: pursuing justice after the Great East Japan earthquake, tsunami, and Fukushima nuclear accident*. Routledge.
- Official Gazette. (2023). 32364. <https://www.resmigazete.gov.tr/eskiler/2023/11/20231109.htm>
- Özden, A. T. (2007). Constituting a sustainable community after disasters: The role of architect(ure). *Alam Bina*, 3(9), 1-17.
- Perry, R. W., Lindell, M. K. & Tierney, K. J. (Eds.). (2001). *Facing the unexpected: Disaster preparedness and response in the United States*. Joseph Henry Press.
- Pelling, M. (2003). *The vulnerability of cities: natural disasters and social resilience*. Earthscan Publications Ltd.
- Pisano, U. (2012). Resilience and sustainable development: Theory of resilience, systems thinking, and adaptive governance. *ESDN Quarterly Report*, 26, 1-20.
- Putnam, R. D. (1995). Bowling alone: America's declining social capital. *Journal of Democracy*, 6(1), 65–78. <https://doi.org/10.1353/jod.1995.0002>
- Sharif, M. B. A. (2021). The impact of natural disasters on small and medium enterprises (SME) in Bangladesh. *Open Access Library Journal*, 8(6), 1-15. <https://doi.org/10.4236/oalib.1107303>
- Şengün, H. (2007). *Afet yönetimi sistemi ve Marmara depremi sonrasında yaşanan sorunlar* [Unpublished Doctoral Thesis] Ankara University.
- Tachiya, H. (2015). Dealing with disasters of unprecedented magnitude: The local government's tribulations and the road to reconstruction. In *Agricultural and forestry reconstruction after the Great East Japan earthquake: Tsunami, radioactive, and reputational damages* (pp. 3-18). The Graduate School of Global Environmental Studies, Kyoto University.
- Taib, Z. M. & Jaharuddin, N. S. (2019). Disaster preparedness and community resilience: A systematic literature review. *International Journal of Disaster Recovery and Business Continuity*, 10(1), 171-182. <https://doi.org/10.21467/ijdrbc.10.1.171-182>
- Theis, T. & Tomkin, J. (2015). *Sustainability: A comprehensive foundation*. OpenStax CNX
- Tierney, K. J., Lindell, M. K. & Perry, R. W. (2001). *Facing the unexpected: Disaster preparedness and response in the United States*. Joseph Henry Press.
- Tierney, K. (2007). Businesses and disasters: Vulnerability, impacts, and recovery. In H. Rodriguez, E. L. Quarantelli, R. Russell and R. Dynes (Eds.) *Handbook of disaster research*. Springer, pp. 275–296.
- UNDRR. (2023). GAR special report 2023: Mapping resilience for the sustainable development goal. United Nations Office for Disaster Risk Reduction. <https://www.undrr.org/gar/gar2023-special-report>
- Varol, N., & Kırkkaya, E. B. (2017). Afetler karşısında toplum dirençliliği [Community resilience in the face of disasters]. *Dirençlilik Dergisi*, 1(1), 1–9.
- Webb, G. R. (2018). The cultural turn in disaster research: Understanding resilience and vulnerability through the lens of culture. In H. Rodriguez, W. Donner and J. E. Trainor (Eds.) *Handbook of disaster research*. Springer, pp. 109–122.

- Woolcock, M. (2001). The place of social capital in understanding social and economic outcomes. *Canadian Journal of Policy Research*, 2(1), 11-17.
- Woolcock, M. & Narayan, D. (2000). Social capital: Implications for development theory, research, and policy. *The World Bank Research Observer*, 15(2), 225-249. <https://doi.org/10.1093/wbro/15.2.225>
- Yeni Şafak (6 November 2023). *Fabrikalar ayakta ama göç yıkabilir: Antakya OSB'deki işletmeler düşük kapasiteyle üretime başladı*. <https://www.yenisafak.com/gundem/fabrikalar-ayakta-ama-goc-yikabilir-antakya-osbdeki-isletmeler-dusuk-kapasiteyle-uretime-basladi-4510976>.



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# Putting Folklore to Use: Reflections on Masal Evi, Halidere-Türkiye, 1999-2000

Folklorun Kullanımı: Masal Evi Üzerine Değerlendirmeler,  
Halidere-Türkiye, 1999-2000

**Hande Birkalan-Gedik\***

## Abstract

The focus of this article is on Masal Evi (Story House) in Halidere, Türkiye and my reflections on storytelling as a therapeutic tool in the aftermath of the 1999 Marmara earthquake. In this initiative, inspired by applied folklore theories, I employed traditional folktales as a means to help children overcome their traumatic experiences. Grounded in approaches by scholars such as Donald Haase and Jack Zipes, the storytelling activities leveraged the healing potential of fairy tales to create a safe and culturally relevant environment for children to explore their emotions and begin to heal. In the storytelling sessions, traditional narratives became tools for expressing complex emotions, allowing children to engage with narratives that mirrored their own experiences of loss and displacement. This approach also resonates with practices like *cuento* therapy, where folktales can help children navigate their psychological landscape, offering both hope and a sense

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of belonging. This article presents my reflections on storytelling sessions that I conducted in Halidere, which encouraged self-expression and community support. It ultimately highlights how culturally sensitive approaches to storytelling and folklore can facilitate community-driven healing in trauma-affected populations. Türkiye's seismic landscape, marked by significant earthquakes, has left profound psychological scars, especially among young survivors. Addressing this, the experience in Masal Evi highlights how folktales can offer comfort and foster resilience, allowing children to process trauma and rebuild their sense of stability. In Masal Evi, the collective effort from volunteers, local families, and children not only established a safe space for healing but also rekindled a sense of community attuned to gender equity and democracy.

**Keywords:** *folk and fairy tales, folktale therapy, 1999 Marmara earthquake, children's folklore, applied folklore, community building*

## Öz

1999 Marmara depremi sonrasında Halidere-Türkiye’de gerçekleştirmiş olduğum Masal Evi’ndeki anlatılara odaklanan bu makale, terapötik bir araç olarak hikâye anlatımının rolü üzerine öz düşüncelerimi sunmaktadır. Uygulamalı halkbilimi teorilerinden esinlenen bu girişimde, çocukların travmatik deneyimlerinin üstesinden gelmelerine yardımcı olmak için geleneksel halk masallarını kullandım. Donald Haase ve Jack Zipes gibi halkbilimcilerin yaklaşımlarını temel alan hikâye anlatımı etkinlikleri, çocukların duygularını keşfetmeleri ve iyileşmeye başlamaları için güvenli ve kültürel açıdan uygun bir ortam yaratmak amacıyla masalların iyileştirici potansiyelinden yararlanmıştı. Hikâye anlatımı seansları, geleneksel anlatıların karmaşık duyguları ifade etmek için araçlar haline gelmiş ve çocukların kendi kayıp ve yerinden edilme deneyimlerini yansıtan anlatılarla etkileşime girmelerine olanak tanıyan kültürel açıdan hassas bir terapötik ortam sağlamıştır. Bu yaklaşım aynı zamanda, çocuklara masalların psikolojik manzaralarında gezinmelerine yardımcı olabilecek hem umut hem de aidiyet duygusu sunabilecek “*cuento* terapisi” gibi tekniklerle de uyumluydu. Bu makale, kendini ifade etmeyi ve topluluk desteğini teşvik eden hikâye anlatımı oturumlarına ait bilgiler vermekte ve nihayetinde hikâye anlatımı ve masallara yönelik kültürel açıdan hassas yaklaşımların travmadan etkilenen nüfuslarda topluluk odaklı iyileşmeyi nasıl kolaylaştırabileceğini ortaya koymaktadır. Türkiye’nin önemli depremlerle şekillenmiş olan sismik coğrafyası, özellikle depremden kurtulan genç nüfus üzerinde derin psikolojik yaralar bırakmıştır. Bu bağlamda ortaya çıkan anlatı seansları halk masallarının nasıl rahatlık sağlayabildiğini ve dayanıklılığı teşvik ederek çocukların travmayı işlemelerine ve istikrar duygusunu yeniden inşa etmelerine olanak tanıdığını göstermişti. Anlatılar gönüllüleri, aileleri ve çocukları bir araya getirerek sadece iyileşme için güvenli bir alan oluşturmakla kalmadı, aynı zamanda cinsiyet eşitliği ve demokrasi değerlerine duyarlı bir topluluk duygusunu da yeniden canlandırmaya yardımcı oldu.

**Anahtar sözcükler:** *halk masalları, masal terapisi, 1999 Marmara depremi, çocuk folkloru, uygulamalı halkbilim, cemaat yaratma*

## Introduction

Türkiye, a land traversed by seismic fault lines, has a long and painful history of earthquakes: the recent earthquakes of 2023, which impacted a large population dispersed in an area from Kahramanmaraş to Adıyaman, from Hatay to Gaziantep and beyond, killed several thousand people and left several thousand others homeless. Other painful events are the devastating Marmara earthquake of 1999, which remains in the collective memory of people in the country even to this day. Based on the magnitude, the area it affected, and the material losses it caused, it was thought to be the largest earthquake of the last century until the recent one in 2023. The 1946 and 1966 Varto earthquakes should not be forgotten (Gedik, 2008; 2011, this issue), nor the great Erzincan earthquake in 1939 (Karancı and Rüstemli, 1995), which serve as stark reminders of the immense human cost and the enduring psychological impact of these natural catastrophes.

There are several countries in the world that have critical fault lines, such as Japan, but the death toll after the earthquakes in those countries is much lower than in Türkiye. Many experts relate the high number of deaths and casualties in the earthquakes referred to above to predictable reasons, but which have so far not been avoided-illegal construction and buildings that do not comply with the earthquake standards; constructions on unsuitable ground; and contractors who skimp on materials in order to make the building cost cheaper. These issues were at stake in the recent 2023 earthquake and 1999 Marmara earthquake as well, which magnified the human and material losses.

What is important is that, after the great Marmara earthquake, some regulations such as compulsory earthquake insurance were introduced but the lessons for damage prevention and people's and buildings' durability were not learnt well, as the 2023 earthquake revealed. It is also important to note that most of the post-traumatic experiences of survivors of these earthquakes were not properly addressed at the time of the huge tremors and some of them emerged years after the earthquakes, haunting various people.

Decades after the 1999 Marmara earthquake, the recent 2023 earthquake, with its widespread publicity, demonstrated that government's role in disaster response has become even more crucial in coordinating rescue efforts, providing immediate relief, and ensuring the safety and rehabilitation of affected communities. The importance of effective disaster management, including the implementation of robust building codes, the conducting of regular emergency drills, and allocation of resources for rapid recovery and rebuilding efforts, was again discussed. The need for the government to work with local and international agencies to improve the resilience of infrastructure and preparedness for future seismic events received more attention. Furthermore, community education, which plays a vital role in disaster preparedness by equipping residents with the knowledge and skills needed to respond effectively during an earthquake, was highlighted. Clearly, educating the public about emergency procedures, safe evacuation routes, and basic first aid can significantly reduce casualties and enhance community resilience. Furthermore, fostering a culture of preparedness through workshops and awareness campaigns empowers individuals to take proactive steps in safeguarding their homes and families. The earthquake of 2023 also

showed, once again, the prominence of physical rescue and rebuilding and the need to heal the invisible wounds of trauma, particularly among child survivors.

With these important points in mind, in this article the lens is turned towards one of the past earthquakes in Türkiye—to the 1999 Marmara earthquake—with a focus on immediate community reactions to help earthquake survivors, most of whom were children in the particular example of Masal Evi (Story House) in Halidere. In the following, I will present my reflections on a community-centred initiative that emerged in the aftermath of the 1999 earthquake to help heal the children’s wounds through the storytelling sessions I led as a volunteer. Here, I used traditional folktales as therapeutic tools for children grappling with the aftermath of the devastating earthquake that struck the region on August 17 and another one on 12 November 1999.

My initiative for using folk and fairy tales for therapeutic purposes owes much to the conceptualisation of US folklorist David Hufford, who defined applied folklore as “...simply the application of concepts, methods and materials from academic folklore studies to the solution of practical problems.” He likened it to fields like engineering with its theoretical as well as applied sides, underlining “such an application of academic folklore knowledge to practical problems provides an excellent setting for the empirical testing of folklore hypotheses and generates by necessity a richly interdisciplinary approach” (Hufford, op cit. in Jones, 1994: 13).

Certainly, the idea of applied folklore has a greater compass that goes beyond what is discuss in the present article. However, I should underline that the idea of using folk and fairy tales emerged from previous applications of fairy tales helping overcome the post-traumatic experiences of children, in alignment with the ideas of betterment of people. Particularly significant here are the works by Bruno Bettelheim (1989), Jack Zipes (1988 [1983]) and Donald Haase (2000) on using folktales in storytelling sessions. The child psychologist and a survivor of the concentration camps of Dachau (near Munich) and Buchenwald (near Weimar), Bruno Bettelheim argued that, by presenting children with archetypal characters and situations, fairy tales provide a symbolic language for understanding and coping with difficult emotions (Bettelheim, 1989).

Moreover, both Jack Zipes’ and Donald Haase’s work became crucial for my using traditional tales therapeutically, as storytelling sessions revealed that the tales have relational, explanatory and creative effects. Of prime importance is that Zipes articulated a theory about fairy tales’ appeal in their recurring pattern involving “the reconstitution of home on a new plane” (Zipes, 1988 [1983]: 176) and accentuated the subversive and transformative power of fairy tales. Driven by the longing for home, “which is discomfoting and comfoting” at once (1988 [1983]: 177), he underlined that fairy tales are important tools for children to articulate their sense of (non)-belonging and further suggested that tales can challenge societal norms and offer alternative perspectives on reality.

Likewise, Donald Haase explored how children use fairy tales to interpret their landscapes and experiences. Haase’s work on the imaginative space of fairy tales was aimed



at building on Zipes' theory of the "liberating potential of the fantastic" (1988 [1983]) and Sigmund Freud's notion of the *unheimlich*<sup>1</sup> (uncanny) (1919). Haase used fairy tales to make sense of those who lived through wars and later, as adults, for reflecting on their violent childhoods and traumatic physical and emotional experiences. As Haase showed, children may use fairy tale spaces to represent and map their wartime experiences-or traumatic experiences-particularly the disfigurement of familiar places and dislocations like exile. As a result, fairy tale spaces often evoke a sense of "home" and can provide children with a sense of comfort, security, and a return to a meaningful life, even amidst distressing circumstances. The imaginative and utopian elements of fairy tales allow children to project hope onto their traumatic environments, potentially contributing to psychological survival.

In the story sessions, similar to Haase's assertions, I realized that folk and fairy tales turned out to be useful vehicles for children to express their feelings and sentiments for different reasons. First, since adults sometimes struggle to understand children's perspectives and experiences, especially in the aftermath of traumatic events like earthquakes or wars, folktales allow talking *to* and *with* children. Second, children lack the sophisticated social and analytical tools for grasping complexities of their surroundings fully and express what happens to them, so folktales can enable them to rely on familiar imaginary landscapes to make sense of their world. In this framework, tales became stories "to think and live with," offering a lens through which children can interpret and even predict the world around them.

I should also mention that studies on the cultural aspects of storytelling as a cross-cultural activity, particularly as seen in "*cuento* therapy" (CT) (Constantino et al. 1985), influenced the story sessions I conducted for nearly nine months. CT involves retelling old stories for a new generation of engaged listeners, typically children or troubled adolescents, with the aim of helping them make sense of adverse psychological conditions or traumatic events, such as rape, sexual assault, and domestic violence as a culturally sensitive modality, specifically designed for Puerto Rican children. Inspired by his own migrant background, the Italian-American psychologist Giuseppe Constantino developed the initial research into CT and tested whether using folktales as a form of psychotherapy would help improve issues with anxiety among Puerto Rican children in 1979. In essence, CT is about the creative use of *cuentos* (mythological folktales) to model an adaptive behaviour and address issues related to bicultural conflict. His basic hypothesis was that if a Puerto Rican mother reads her children folktales from their culture, it could improve the child's overall sense of well-being.

Earlier works on folktales and their connection to reality, which are now considered classics-especially those by Max Lüthi (1947) and Lutz Röhrich (1956)-on different aspects of "reality" have also shaped my approach. Crucial for the storytelling sessions was the perspective provided on the fairy tale by Swiss folklorist Max Lüthi, who underlined five basic features of a fairy tale: one-dimensionality<sup>2</sup> depthless-ness,<sup>3</sup> abstract style,<sup>4</sup> isolation and universal connectedness<sup>5</sup> and world containment.<sup>6</sup> Fairy tales enabled both the listeners and the tellers to travel to and from here to there and from our world to the world of the marvellous. This identification with fairy tale landscapes can be particularly illuminating for children who faced displacement, violence or trauma. In this light, for instance, a child who might have

experienced the destruction of her home could find solace in the idea of a magical castle or a secret annex, because they can draw parallels between their own reality and the fantastic. The familiar narratives and archetypes found in fairy tales, such as heroes, villains, and quests, can help children understand complex social dynamics and moral conflicts. In other words, stories function like bridges between the world of reality and the “world of fantasy.”

Certainly, German folklorist Lutz Röhrich’s *Märchen und Wirklichkeit: Eine volkskundliche Untersuchung* [Fairy tales and reality: a folkloristic examination] (1956)-translated into English as *Folktales and Reality* (1991)-provided me with the frameworks to see folktales more analytically. Röhrich opposed the notion that the legend is realistic and the folktale unrealistic, showing that the underlying elements in folktales are, in different ways and scales, connected to reality. I found Röhrich’s identification of folktales as a partnership between fantasy and reality particularly useful in conceptualizing my approach, which counters the often-repeated accusation that folktales are complex systems of lies and highlights their usefulness for understanding real-world dynamics.

Other significant works offer cross-cultural and interdisciplinary approaches to the use of traditional narratives, particularly folktales, which are “marvellously hopeful” (Verena, 1995, p. x). Brun et al. (1993) demonstrated that fairy tales could be utilized in therapy and counselling in various ways and on multiple levels. They also highlighted other therapeutic methods, such as music therapy and art therapy as empowering strategies that can be applied effectively in post-earthquake contexts. Coming from psychiatry, Roberts and Holmes (1999) showed that at the heart of any therapeutic encounter there is always a story. Their starting point was how people define and think of themselves and of others; in relationships; and in medicine, particularly in psychiatry and psychiatric treatment.

Reflecting on storytelling, using stories for therapeutic purposes now, I can trace other seminal works that appeared after my involvement in the folktale sessions. Zipes’ *Speaking out: storytelling and creative drama for children* (2004) takes the stories to another, familiar genre: theatre and uses of storytelling techniques in inner-city schools as a rich and powerful tool for self-expression and for building children’s imaginations. Since children often struggle to articulate their experiences and emotions through direct language, the storytelling sessions aimed to create a safe and culturally sensitive space, where Turkish-and other-folktales showed the power of storytelling in providing a safe and culturally sensitive space for children.

## **1. Observations and reflections from Halidere**

When the terrible shaking happened in the Marmara region on August 17, 2000, it was 3:02 a.m., and it caught people asleep, causing the most devastating damage in the seashore towns such as Değirmendere, Halidere, Ulaşlı and Gölcük, which were located nearly 100 m above sea level. These towns, which have been historical centres for the Turkish populations migrating from the Soviet Union, are known for their unique compositions and characteristics. For example, Değirmendere played an important role in cultural and artistic activities in the region, while Ereğli and Halidere became important nodes for agricultural activities. Ulaşlı

was a fishing community, and Hereke, on the other side of the bay, was an important centre for carpet weaving, known around the world for its trademark carpets.

Since the 1950s, these towns, like most of the districts in Kocaeli, have pulled migrant populations from different parts of Türkiye. Starting with 1960s, the region, particularly Gölcük, became a site of heavy industry, including the Gölcük shipyard, which is known for its shipbuilding and maintenance activities. Gölcük was designated as the main base of the Turkish Navy as it hosted one of Türkiye's most important military shipyards, where nearly 3,000 people worked for producing battleships and submarines; the İPRAŞ (İstanbul Petrol Rafinerisi A.Ş./İstanbul Petrol Refinery Joint Stock Corporation) should also be mentioned. Today known as TÜPRAŞ Oil Refinery, it was founded by the American Caltex company in 1961 and became an important industry that provided job opportunities to a large number of people. At the earthquake, the human loss and damage at the Gölcük Shipyard were immense. At the TÜPRAŞ oil refinery, a large fire occurred and a toxic leak at the AKSA chemical plant in the district of Yalova was also detected.

At the time of the earthquake, I was still a graduate student at Indiana University Folklore Institute, living in Bloomington, Indiana. Having defended and passed my doctoral thesis, I was at the stage of polishing it and getting ready to go back to Turkey. A few weeks after the earthquake, I found an e-mail message in my inbox from the H-Net's Network on for Ottoman and Turkish Studies. This was a call from the list server of which I was a member, sent by Prof. Dr Semih Vaner of AFEMOTI (Association française pour l'étude de la Méditerranée orientale et du monde turco-iranien). The message was about the request for supporting children who survived the earthquake (also see, Chaoul, 2000). To me, this message sounded unique in the sense that it did not ask for any particular financial contribution but aimed at eliciting ideas for helping the children achieve and maintain better mental health. Since I was going to be in Türkiye soon, I responded to the message saying that I hoped I could put my expertise in folklore to use in the earthquake region. In a few days, I was communicating with Prof. Dr Semih Vaner, the president of AFEMOTI, who lent support for the materials and other items related to Masal Evi in Halidere.<sup>7</sup>

Recognising the need for psychological support for these children, AFEMOTI initiated a campaign to aid the young victims of the disaster. An exploratory mission visited the earthquake zone in Türkiye from 28 October to 3 November 1999. In the mission, where I was also present, Ms Bathilde Dopffer, delegated by the board of AFEMOTI, took part as an observer. Dr Moncef Bennour, a delegate from the *médecins du monde* was specifically responsible for assessing the medical situation and needs of the population. Dr Michel Chaoul, a psychiatrist in Saint-Denis, and Prof. Dr Semih Vaner also took part in the mission (Birkalan, 2001: 365). Dr Chaoul prepared an initial report about the children and indicated the symptoms as nervousness and severe anxiety; fear of separation from the parents, family, and home; violent interaction with other children, illusions, and pseudo-hallucinations (Birkalan, 2001).

After a series of meetings with several NGOs in Istanbul and in the region, AFEMOTI decided to take up joint work in Istanbul with an NGO specializing in human health and education. Our contact person was Necdet Kutlucan, an artist and art specialist, who

came to the region on the fourth day of the earthquake and had the children involved with painting activities. In the meantime, I joined the group of volunteers as a representative of AFEMOTI and worked together with him. In the following months and with the aid of other volunteers, classes and meetings on English, art, ecology and environment were launched in Masal Evi, and teachings and discussions were promoted for “better living” with an emphasis on democratic governing and gender equity. The presence of academic concerns and professionalism in our work was highlighted with AFEMOTI’s support, while the work was largely amateur in spirit.



**Figure 1:** A sample from the children’s drawings. (From the archive of the author).

Starting from December 1999, the storytelling events took place in Halidere, where children demonstrated various symptoms of trauma, including nervousness, anxiety, fear of separation, and sleep disturbances. Every Sunday, a group of approximately 35 children of ages varying between 6 and 15 years old regrouped in the tent, where I employed a range of storytelling tools, which I myself developed.

Activities in the region primarily included therapeutic story sessions, which were born from the need to provide support that went beyond the traditional methods of psychological intervention, which some survivors found intrusive and insensitive. Fairy tales, with their inherent capacity to address complex human experiences through symbolism and metaphor, on the other hand, offered a potentially powerful tool for healing and recovery. These included familiar stories with therapeutic themes, emphasizing fairy tales with happy endings, collaborative storytelling, reading tales together, and using written and illustrated stories. Besides storytelling, I used creative activities such as drawing and telling, which provided channels for the children to express themselves through art. This was realized thanks to the help of Necdet Kutlucan, who was mainly responsible for the children’s artistic activities.



**Figure 2:** Pictures that children made and displayed in the tent at the beginning of storytelling sessions. As can be seen from the picture, this was the time when I met with children in the temporary tent, which the volunteers and the locals made together. Later on, our activities took place in the pre-fabricated container (From the archive of the author).

At the beginning, the children of Halidere were behaving the way described by Dr Chaoul. Slowly but surely, we could observe that the children's well-being increased considerably. Masal Evi was established around other tents, surrounded by the collapsed houses, where people tried to find shelter on cold days. Our tent was barely larger than the other tent-homes, where I had to work with 35 children each Sunday for a couple of hours. Ideally, we wanted to divide the children into age groups, but thinking over the situation, we came to an understanding that this would have been too luxurious in terms of time and space, so we worked together with all children at once. However, conducting story sessions in such a small place with so many children was challenging. During the time in Halidere, I had the children write down stories and had them illustrate these stories individually and in groups, which lent a powerful dimension of validation and witnessing.

We had to keep the children busy: having children between the ages of 3 and 15 meant that every child had to participate in the maintenance of the tent. Later on, we saw that this had influenced children positively, since they gained a better sense of responsibilities and rights. Together with the children, we divided the daily chores. Everybody took turns cleaning the tent before they went to some other tent space. Perhaps as important as the narrative sessions were the times spent together in the tent, because the tent meant "community."

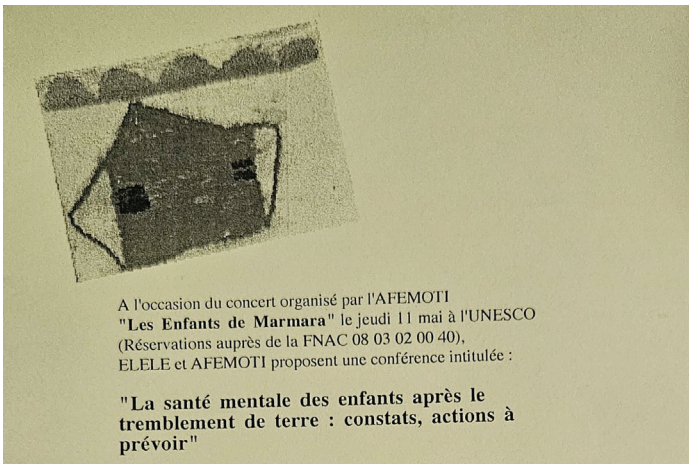
Several survivors, as I developed a rapport with them, underlined that they became tired of hearing "So, tell us what happened that night?" or similar questions asked by some psychologists who lost interest in talking with the survivors after a few sessions. Having 35 boys and girls from different age groups also created an interesting dynamic among the group. As I briefly alluded above, we witnessed a strong presence of traditional gender roles. One of the children in the tent once told me that the boys and girls could never sit together at the same desk in the classroom (Birkalan, 2001).



As well as children, curious parents grew into active Masal Evi participants and helped to build the community again. Older children became the sisters and brothers of the young ones and learned the meaning of “watching out for the others” and “lending a helping hand when necessary.” In this respect, much credit was due to the project coordinator Necdet Kutlucan, who was probably the most instrumental figure in providing this environment. Unlike the other volunteers, including myself, Kutlucan stayed in the region and got a better sense of the people, and he continued the activities through the rest of the week. This was also the greatest strength of the project: unlike some other models, our model involved “hands-on-learning,” and emphasized the “doing” part in life, rather than giving children some passive learning drills.

With his humanist vision and constructive ideas and support, Prof. Dr Semih Vaner spearheaded the project in many ways. For example, he was very receptive when I suggested exhibiting children’s drawings in Paris. As a result, at the planning stage of the exhibit, I selected a great number of children’s drawings and took them for professional curating at a *passepourtout* atelier in Istanbul, which treated the children’s paintings as artworks. With the help of volunteers and, again, with the support of Semih Vaner and Ali Kazancıgil, who directed social sciences at UNESCO, we set up the pictures for the exhibit. The meeting in 2001 in Paris at ELELE - Migrations Cultures de Turquie (literally meaning hand in hand-Migration Cultures of Türkiye, was another occasion which increased the visibility of the project. ELELE is an organisation that focused on the migrant Turkish population in France and organised, in collaboration with AFEMOTI, a public evening on the mental health of the children after the earthquake.

In 2000, I presented some preliminary thoughts on the use of folktales in coping with tragedy at the American Folklore Society Conference that took place in Columbus, Ohio.<sup>8</sup> In 2001, I provided an initial assessment of the activities, to underline the valuable support of AFEMOTI in the Young Researchers issue of the journal (Birkalan, 2001). I gave two talks on Masal Evi activities with children and their state of mental health both at ELELE and at UNESCO, in Paris, which drew French and Turkish academics and intellectuals alike and created an environment for the visibility of the storytelling activities I conducted with children with the support of AFEMOTI



**Picture 3 :** Information flier of ELELE for the lectures on the mental health of children.  
(From the archive of the author).

## 2. Putting folktales to use after the Marmara Earthquake

I aimed at using a wide range of tales with different characteristics. Primarily, I selected familiar stories with therapeutic themes. These included fairy tales that addressed themes relevant to the children's experiences, such as loss, fear, and the restoration of safety and security, inspired by Bettelheim's assertion that a child "can find a better solace from a fairy tale than he can from an effort to comfort him based on adult reasoning" (1989: 45).

I tried to prioritise fairy tales with happy endings, offering a sense of hope and the possibility of overcoming adversity. The tales which started with the hero's departure were certainly of great use for this purpose. What happens to the hero? He undergoes a journey, which is not easy, but eventually reaches the happy ending: the famous cycle of relief though hardship, which is often seen in Turkish and Middle Eastern tale traditions.<sup>9</sup> In these activities, for example, one idea was to use a familiar story that already contained a theme we wanted to convey-such as a child or character eventually finding safety after a frightening experience or dealing with the loss of family or home. By these means, I aimed to help children overcome fears of separation from their parents, family, and home, as Dr Chaoul highlighted in his preliminary report.

Second, based on a familiar protagonist, children created new stories together, where the protagonist went through some hardship, but eventually reached the happy ending. This is what I called "collaborative storytelling." I performed this type of activity in small groups, where I used familiar fairy tale characters placed in the context of the earthquake and encouraged the children to create new narratives and explore their feelings through imaginative storytelling (Birkalan, 2001). I asked, for example, what happened to [the Turkish version of] Cinderella in the earthquake? I allowed for venting of experience and emotion first since that was vital in post-crisis. Then we joined with the narrative and shaped it in a mutual storytelling format to expand on themes in a therapeutic way.

Likewise, I tried to introduce certain Aesop's fables that explored themes of resilience and the importance of perspective, such as "The Hares and the Frogs" and "The Lion and the Elephant," hoping to help children cope with their feelings of vulnerability and loss (Birkalan, 2001). The first one exemplified the themes of self-perception, courage, and contentment, underlining that feeling perplexed and anxious is not limited to certain characters. The moral of the story is often interpreted as a reminder to appreciate one's own circumstances and to realize that others may struggle with similar or even greater challenges. It encourages contentment and resilience in the face of difficulties, highlighting that everyone has their own fears. The second one, "The Lion and the Elephant," showed that strength alone does not make one invincible, and that humility is important, especially for those in positions of power. It serves as a reminder that everyone has weaknesses, and that true strength often includes the wisdom to recognize and respect others. These fables were well aligned with our purpose, since they enabled the children to talk about their in the post-trauma periods and became vehicles to talk about similar experiences they had.

In another group, I tried using "stories in the form of everyday experiences," which created one-dimensionality for children to navigate between the world of the fairy tales and the real world. To offer an example: In the spring, when the weather was more pleasant, we



took the kids outside. It was important for them to pass time in nature, since it had the most healing effect through a sense of rejuvenation. A 5-year-old boy was playing with some leftover woodblocks for the home he was building. I once approached and asked him if he knew the story of the little boy who wanted to build a house. He said, “Yes” and we started “creating” a story together. The important point of this exercise was that we were no longer talking about the boy-he faded away as he became out of focus, while the narration with the first and the third person alternated. The “other” boy was our hero, who happened to be interested in making a home. Through the story he told me that he wanted to make a “sturdy” one that would withstand the earthquake. His house should have only one floor and two rooms: one for him and his brother, and one for his parents. After the story, when we talked to his mother, we learned that he has not been able to sleep without his mother-during the day, or at night (Birkalan, 2001).

In retrospect, my usage of folktales come closer to three of the four approaches that were identified by Veronika Brun, Ernst W. Pedersen, and Marianne Runberg identified as intuitive, psychodynamic interpretation, play therapy and creating fairy tales (1993). The tales I selected oscillated between the “intuitive” approaches, where the client identifies with a fairy tale intuitively. The authors also noted play therapy, driven by a child’s choice of a toy or play, which also become important vehicles in some of the narrative sessions in Halidere. As I mentioned earlier, I also relied on the creation of individual fairy tales with children, mostly in group sessions. I did not use psychodynamic interpretation, which went beyond the scope of my expertise in narrative research in general and the application of folktales for therapeutic cases in particular.

In addition to the narrated stories, I also purchased books and painting supplies for the children thanks to the financial support of AFEMOTI. We read the stories in the books and, in the later phases of the sessions, children painted different scenes from their favourite fairy tales. Most of the paintings, created in the middle phases of the research, presented the hopeful landscape of the stories. However, there were a few “unpleasant” landscapes-dark colours and a hodgepodge of painting with skulls and blood (Birkalan, 2001: 301). Under the group of written and illustrated stories, children were encouraged to write down their stories and create illustrations, which supplied them with a tangible means of expressing and validating their experiences.

## **Conclusion**

Through various usages of the stories, we were able to talk *to* and *with* the children in Halidere after the great Marmara earthquake. Our work with a group of approximately 35 children, however small, drew great attention from the local community. First, using folktales as narratives in their own rights provided an “imaginary” space for children to express the inexpressible and to say the unthinkable. Masal Evi tried to emphasize a philosophy of life that involved “doing” rather than “memorizing.” It also aimed to make not only children but also adults act upon their own lives by moulding them into active participants, rather than passive observers.

As I wrote back in 2001, much to our dismay, we had to leave the project, without knowing with any certainty whether the children had recovered. As I said at the beginning, AFEMOTI provided a modest budget for the storytelling sessions, which were enriched by children's tales and drawings. Reflecting on the project, I believe that having additional team members and conducting more structured assessments could have enriched our work with the children. While the project had many positive aspects, it faced challenges due to limited resources and its temporary nature, which restricted its scope and impact. At times, I felt a strong need for interdisciplinary work—folklorists collaborating with psychiatrists, counsellors, and particularly a child psychologist, as having a counsellor on the team could have enabled us to assist others who were willing to share their experiences.

Nevertheless, it became clear that fairy tales served as powerful tools for helping children communicate, socialize, and reconnect with their external world, particularly in a time of crisis. Furthermore, being in the region for nearly nine months also brought other positive effects in terms of gender equity: mothers, many of whom were homemakers, began taking on more active roles within the community. In retrospect, I should underline that Masal Evi showed the power of the community, as it became more than just a space for storytelling for children. It evolved into a hub for community building and support. Parents actively participated in the project and helped to create a sense of shared social space through which people were able to develop a sense of belonging. Older children took responsibility, demonstrating empathy and care for their younger peers. The project, in its essence, fostered a spirit of collective healing and resilience.

In spite of its visible and invisible challenges, Masal Evi underscored the profound therapeutic potential of fairy tales for children who have faced trauma. Through these storytelling sessions, children found a culturally sensitive and emotionally secure space to explore their feelings, process their experiences, and take early steps toward healing. The project emphasized how vital community engagement, imaginative expression, and the transformative power of narrative can be in fostering resilience and rekindling hope amid adversity. The impact on the children of Halidere, and the insights gleaned from their connection to fairy tales, highlights the need for creative, culturally attuned approaches to trauma recovery. In its modest setting, Masal Evi stands as a powerful testament to the enduring strength of storytelling to bring light to the darkest of times, helping to guide a path toward healing and renewed hope.

As I alluded at the beginning, Türkiye's rich historic and geographic geography, which also makes it culturally and socially unique is located right on different seismic lines. This makes the inevitability of the occurrence of the earthquakes. What is however evitable is the human and material loss. It is my only hope that earthquake preparedness takes the full force in the coming years. On the other hand, in the case of post-trauma recovery—not only just related to earthquakes but also applicable in similar situations—my Masal Evi experience highlights the crucial need for interdisciplinary collaboration in projects aimed at post-trauma recovery, especially when working with children and communities affected by disasters. Future initiatives would benefit from the combined expertise of folklorists, social workers, psychologists, and child development specialists, among others. Each discipline

can offer unique insights and methods that together create a more holistic approach to healing. For example, while folklorists provide valuable cultural narratives, psychologists and counsellors could bring strategies for addressing trauma and emotional resilience. Social workers, meanwhile, could facilitate ongoing community engagement and support. By forming diverse teams, future projects can build on a wider range of skills, making their interventions more comprehensive and impactful. This approach not only fosters greater healing but also empowers communities to become active participants in their own recovery.

### Endnotes

- 1 Freud's concept of the "*unheimlich*" (uncanny) serves as a profound exploration of the familiar becoming strange. He explains that the term "*heimlich*" refers to what is known and familiar, while "*unheimlich*" denotes that which is concealed or hidden. This transformation occurs when something familiar is repressed, leading to its return as something alien. In essence, the uncanny is not a new or foreign experience; rather, it is an old, familiar aspect of our psyche that has been pushed out of sight, only to resurface in unsettling ways. Freud's insights reveal how our minds grapple with the complexities of repression and recognition, making the uncanny a significant theme in understanding human psychology.
- 2 In the simplest terms, one dimensionality can be described as the state in which the supernatural and earthly dimensions are levelled in the same world, or when supernatural and non-supernatural elements exist side by side in the same dimension, such as Cinderella talking to the fairy godmother. In this framework, a princess will not question her turning into a bird and flying away. Similarly, a prince traversing a land by means of a magic object is not to be questioned because the tale will present everything in the tale as natural and ordinary. Accordingly, there is no explanation for supernatural events.
- 3 According to Lüthi, depthlessness is another characteristic of a fairy tale. Characters lack stable relationships, they exhibit very slow ageing processes, they do not grow or change emotionally, they do not struggle with difficult decisions, and injury and violence do not harm the hero permanently.
- 4 Lüthi explains abstract style as the means for achieving depthlessness of the tale as a whole. The abstract style refers to a lack of realism; in other words, nothing or nobody is described in detail and the plot is always action oriented. Abstraction often employs clichéd descriptions such as the "handsome prince," "old woman," or "beautiful princess," which enables children to focus more on the plot rather than on the features of the characters in the tale.
- 5 In Lüthi's conceptualisation of the European folktale, characters often exist in isolation, embodying a sense of detachment from sustained connections and close relationships. The protagonist is staged in dark, labyrinthine forests, high, unapproachable towers, or vast, empty fields. Each environment emphasizes the character's separation from society, creating a backdrop that is as detached and eerie as the encounters within it. Separated from family, the hero sets out on a journey from the familiarity of "home" into the unknown "real world." Here, tasks await—challenges that will test their resilience, cleverness, or bravery. The hero encounters other characters in isolated episodes, brief yet pivotal interactions that serve a specific purpose. Relationships are transactional, designed to propel the protagonist towards their goal without entangling them in emotional ties. Thus, the interactions in the world of the fairy tale are temporary, functional, and devoid of deep interpersonal connections.
- 6 According to Lüthi, the fairy tale encompasses an entire world within its small frame, drawing on any motif it finds useful—the "magical, the mythic, the numinous" or the spiritual. It can combine elements from rites, erotic and worldly elements, absorbing and reshaping these motifs, stripping them of their original meanings to serve its own purposes. In this way, a fairy tale represents the contents of the world, creating a microcosm where every theme, symbol, and event contributes to a larger, universal narrative of the tale itself.
- 7 Semih Vaner (1945-2008) was a political scientist with a specialization in Türkiye and international relations in the Middle East. He was research director at the National Foundation for Political Science (FNŞP-CERI). Born in Istanbul and a graduate of the Faculty of Political Science at the University of Lausanne, Vaner received his PhD from the University of Paris-Sorbonne. He taught at the University of Bursa (Türkiye), before becoming a researcher at the CERI (Centre d'études et de recherches internationales) in 1982 in Paris. He was the director of the Cahiers d'Études sur la Méditerranée Orientale et le monde Turco-Iranien (CEMOTI) and president of AFEMOTI (Association française pour l'étude de la Méditerranée orientale et du Monde Turco-Iranien). For more information, see: Jean Marcou: <https://ovipot.hypotheses.org/465>. [Accessed on 12 August 2024]

- 8 My paper “Masal Evleri: Children, Folktales and the Marmara Earthquake” was presented at the “Coping with Tragedy” panel that took place on Friday, 27 October 2000 in Columbus, OH.
- 9 As demonstrated by Ulrich Marzolph in 2017 in his book *Relief After Hardship The Ottoman Turkish Model for the Thousand and One Days*, the theme of relief after hardship is a fundamental structure in the European fairy tales, where the protagonist overcome his trials and attains a better status. This phrase reflects the belief that after times of struggle or adversity, ease and relief will eventually come, a common theme in Middle Eastern literature traveling to the West and conveying messages for hope and resilience, often used to comfort someone facing tough times.

**Research and publication ethics statement:** This article is developed from the work I voluntarily participated in at the Fairy Tale House project conducted by AFEMOTI in Halidere between 1999 and 2000, as well as from my research paper summarizing these activities. It has been enriched with contemporary theoretical and methodological approaches. In its current form, the article has not been published elsewhere and has not been submitted as a journal article or book chapter to any other journal or publisher.

**Authors’ contribution levels:** The article is single-authored.

**Ethical committee approval:** Since the research was conducted before 2020 (between 1999 and 2000), ethical committee approval is not required.

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## References

- Bettelheim, B. (1989). *The uses of enchantment: the meaning and importance fairy tales*. Vintage Books.
- Birkalan, H. (2001). Masal evi: children, folktales, and the Marmara earthquake. *CEMOTI Jeune recherche* (31), 295–302.
- Birkalan, H. (2000). Masal evleri: children, folktales, and the Marmara earthquake. Paper presented at the American Folklore Society Meeting, Columbus, OH.
- Brun, B. et al. (1993). *Symbols of the soul: therapy and guidance through fairy tales*. J. Kingsley Publishers.
- Chaoul, M. (2000). Appels de l’AFEMOTI. CEMOTI. *L’humanitaire. L’Albanie* (29), 365–370.
- Constantino, G., R. G. Malgady & L. H. Rogler. (1985). *Cuento therapy: folktales as culturally sensitive psychotherapy for Puerto-Rican children*. HRC Monograph No. 12. Waterfront Press.
- Freud, S. (1919 [1999]). Das Unheimliche. In *Gesammelte Werke. Chronologisch geordnet*. Anna Freud u. a. (Eds.), Bd. XII. Fischer Taschenbuch-Verlag.
- Gedik, E. (2008). (Eds.). *Sozialer, kultureller, ökonomischer und sprachlicher Wandel im Rahmen der Binnenmigration und der transnationalen Migration: Soziale Netzwerke am Beispiel der Provinz Varto in Ostanatolien, Türkei*. Doctoral dissertation.

- Gedik, E. (2011). Migrant organizations in Turkey and Germany: Local, transnational and global contexts of Kurdish-Alevis from Varto, Turkey. *Urban Anthropology and Studies of Cultural Systems and World Economic Development*. 40(1–2), 151–204.
- Giuseppe, C. et al. (1985). *Cuento therapy: folktales as a culturally sensitive psychotherapy for Puerto Rican children*. Waterfront Press.
- Haase, D. (2000). Children, war, and the imaginative space of fairy tales. *The Lion and the Unicorn* (24), 360–377.
- Jones, M. O. (1994). *Putting folklore to use*. University Press of Kentucky.
- Karancı, N. A. & Rüstemli, A. (1995). Psychological consequences of the 1992 Erzincan (Turkey) Earthquake. *Disasters* 19(1), 8–18.
- Kasapoğlu, A. & M. Ecevit. (2002). Impact of the 1999 East Marmara earthquake in Turkey. *Population and Environment* 24(4), 339–358.
- Lüthi, M. 1986). *The European folktale. form and nature* (tr. by John Niles). Indiana University Press.
- Lüthi, M. (1947). *Das europäische Volksmärchen. Form und Wesen. Eine literaturwissenschaftliche Darstellung*. Francke.
- Marcou, J. (2008). Semih Vaner nous a quittés. <https://ovipot.hypotheses.org/465>. [18 February 2008. Accessed on 5 August 2024]
- Marzolph, U. (2017). *Relief after hardship: the Ottoman Turkish model for the thousand and one days*. Wayne State University Pres.
- Röhrich, L. (1991). *Folktales and reality* (tr. by Peter Tokofsky). Indiana University Press.
- Röhrich, L. (1979). *Märchen und Wirklichkeit*. Franz Steiner Verlag.
- Kast, V. (1995). *Folktales as therapy* (tr. by Douglas Whitcher). Fromm International.
- Roberts, G. and J. Holmes (1999). *Healing stories: narrative and psychiatry and psychotherapy*. OUP.
- Zipes, J. (2011). *Fairy tales and the art of subversion*. Routledge.
- Zipes, J. (2004). *Speaking out: storytelling and creative drama for children*. Routledge.
- Zipes, J. (1995). *Creative storytelling: building community, changing lives*. Routledge.



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*Araştırma makalesi/Research article*

# Earthquake in Mythological Narratives

## Mitolojik Anlatılarda Deprem

**Meryem Bulut\***

### **Abstract**

This study focuses on how the mythological narratives of various societies interpret earthquakes differently. Since ancient times, discourses on earthquakes have diversified and changed. Societies have developed various interpretations in the face of natural events such as earthquakes, volcanic eruptions, melting of glaciers, plagues, famine, drought. Eschatological myths include narratives that respond to such devastations. Eschatology deals with the last events in the world or in human history, that is, the end of the world or the end of humanity. Mythological narratives explain earthquakes as the results of divine forces to punish people. Some societies believe that earthquakes occur as a result of a wrong action. Different societies interpret earthquakes with different symbols, and these symbols may vary from society to society. Explanations of earthquakes may vary depending on the experiences, beliefs and history of each society. Although physical conditions play a determining role in shaping the symbols, societies tend to borrow from each other the symbols they use in their mythological narratives to explain the origin of a sacred, social, natural, supernatural or socio-cultural phenomenon. Therefore, even societies that live far apart may use symbols that are independent of their

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physical environment.

**Keywords:** *earthquake, earthquake gods, mythology, eschatology*

## Öz

Bu çalışma, çeşitli toplumların mitolojik anlatılarının depremleri nasıl farklı yorumladığına odaklanmaktadır. Antik çağlardan itibaren depremlere ilişkin söylemler çeşitlenmiş ve değişmiştir. Toplumlar depremler, volkanik patlamalar, buzulların erimesi, vebalar, kıtlık, kuraklık gibi doğa olayları karşısında çeşitli yorumlar geliştirmişlerdir. Eskatoloji mitleri bu türden yıkımlara yanıt vermiş anlatıları içermektedir. Eskatolojya dünyada veya insanlık tarihindeki son olaylarla yani dünyanın ya da insanlığın sonu ile ilgilidir. Mitolojik anlatılarda depremlerin nedenleri ilahi güçlerin insanları cezalandırmak amacıyla gerçekleştirdikleri eylemleri olarak açıklanır. Bazı toplumlarda bu eylemler kurallara uyulmazsa insanların sonunun geleceğine dair bir uyarı olarak yorumlanır. Bazı toplumlarda yanlış bir eylemin sonucu olarak depremlerin meydana geldiğine inanılır. Depremlerin nedenleri farklı toplumlarda değişik yorumlanmakta ve yorumlara ilişkin kullanılan semboller de toplulukların yaşadığı fiziksel koşullarla ilişkili olarak geliştirilmektedir. Depremlere ilişkin açıklamalar her toplumun kendi deneyimlerine, inançlarına ve tarihine bağlı olarak değişebilmektedir. Depremleri yorumlamak için kullanılan semboller toplumların yaşadıkları fiziksel koşullara uygun olarak geliştirilip değişse de, farklı toplulukların benzer sembollerini kullandıkları bilinmektedir. Toplumlar mitolojik anlatılarında kutsal, toplumsal ve doğal, doğaüstü ya da toplumsal-kültürel bir görüngünün kökenine ilişkin açıklamalarında kullandıkları sembollerini birbirlerinden ödünç alma eğilimi içindedirler. Dolayısıyla fiziksel olarak uzak mesafede yaşayan topluluklar yaşam alanları ile ilişkili olmayan sembollerini kullanmaktadırlar.

**Anahtar sözcükler:** *deprem, deprem tanrıları, mitoloji, eskatolojya*

## Introduction

An earthquake is a natural disaster that occurs as a result of sliding movements caused by a fracture in the earth's crust. Tremors that occur in areas affected by vibrations caused by crustal fractures cause earthquakes (Tümertekin & Özgüç, 1997). The destructive effects of natural disasters, especially in settlements where people live densely, can result in very serious losses (Özey, 2006). Human activities are not decisive in the formation of earthquakes. However, they have a great effect on the damages of earthquakes. Interpretations regarding the causes of earthquakes and other natural disasters with destructive effects vary across different societies. Since ancient times, these interpretations have been embedded in various mythological narratives, with symbols differing according to cultural contexts.

Like many narratives about lifestyles in the past, narratives about the causes of earthquakes have also been included in mythological interpretations (Yıldırım & Nişancı, 2023: 112-136). Starting from ancient times, explanations of the causes of natural phenomena with severe and



destructive consequences were often associated with supernatural creatures. People believed that divine powers caused the earthquake. The interpretation of earthquakes within cultural values may vary depending on each society's unique experiences, beliefs, and history. In addition, they are expressed by symbols developed depending on the physical conditions of the settlements where societies live. Earthquakes were often viewed as punishment by supernatural forces as a result of the anger of the gods or as a result of the corruption of humanity. In some mythological narratives, people thought about earthquakes as a warning message sent by gods to humanity. If these warnings were ignored, even greater disasters were believed to follow.

In mythological narratives, there are explanations about the origin of a sacred, social and more natural, supernatural or socio-cultural phenomenon (Emiroğlu & Aydın, 2009: 602). In other words, myths describe how a reality comes to life thanks to the achievements of supernatural beings, whether it is the whole reality in its entirety, that is, the cosmos, or only a part of it (e.g., an island, a plant species, a human behaviour, an institution) (Eliade, 1993: 13). On the other hand, myths are narratives that emerge with the effort to make sense of the supernatural and the unknown (Şahin & Ağbaht, 2021: 2545).

Earthquake is one of the natural phenomena whose cause is unknown and ancient societies attempted to understand them. When we look at the myths produced by people living in different parts of the world and in different societies, it is possible to see similar motifs (Bokhari & Masood, 2018; Kluckhohn, 1959). Myths provide important insight into how the societies they belong to, how people perceive the world and what they think about events (Şahin & Öz, 2022). Myths not only provide explanations for natural phenomena across the world but also offer narratives regarding the destructiveness of earthquakes.

These mythological narratives often communicate important messages, particularly concerning earthquakes, with the aim of influencing people's behaviour in line with cultural norms. Just as in the past, individuals are expected to adhere to certain values, with the belief that failing to do so will invoke divine punishment. In these narratives, earthquakes are frequently depicted as punishments from gods or goddesses. In contemporary times, such events are sometimes interpreted within the framework of monotheistic beliefs.

For instance, some people perceived the 1999 Gölcük earthquake as divine retribution for the moral degradation of society: "From what he saw with his own eyes, there were naked bodies of young boys and girls. Thousands of buildings collapsed, and people died because they made love." (Ekşi Sözlük, 27 January 2019). Certain segments of society believe that earthquakes occur as a consequence of the desecration of sacred values. After major destructions, some events are reinterpreted, with explanations suggesting that warnings had been issued beforehand. According to these comments, the group accused of desecrating the sacred can vary. For instance, "The soldiers marched on the Qur'an, and the earthquake happened because of it" (Ekşi Sözlük, 01 June 2022). On 17 August 1999, there was a large military population in Gölcük, and perhaps the earthquake was associated with the soldiers. Cultural values, which are decisive in people's daily life practices, are also effective in the interpretation of supernatural events.

One can also find comments that extraordinary events can proceed great destructions. Anticipating that a divine punishment might be coming, some people have given the necessary warnings. However, the earthquake occurred because they could not get people to give up their wrong behavior. “A week before the earthquake, my father was sitting in the park and he saw a man shouting, and he kept shouting, ‘repent, repent.’” (Ekşi Sözlük, 01 June 2022). Similarly, the 2023 Kahramanmaraş-centred major earthquake, which affected eleven provinces with great losses, was also seen as a punishment (God’s punishment for people who sin). “We have to ask, what did we do to trigger this earthquake? This attribute belongs to God. It means, “How great is His glory!) has committed every crime, including shirk, which brings wrath to the habit. O God, we ask forgiveness for our sins. We believe only in you as the God” (You Tube, 13 March 2023). Some segments of the society believed that the devastating earthquakes in Türkiye served as warnings for a society in decline. These interpretations closely resemble the flood myths found in Sumerian mythology (Hooke, 1991: 32), as well as those in the Torah, Bible and Qur’an. However, unlike the flood myths, there is no concept of ‘chosen people’ in the context of earthquakes.

A recent study conducted with religious officials in 2023 on the earthquakes showed striking issues, as they were related to religious explanations, which underlined earthquakes as divine punishments. According to the research, some of the religious officials expressed their opinion that the earthquake occurred as a result of the rupture of fault lines. It has been determined that some religious officials, on the other hand, see earthquakes as a divine punishment or warning by referring to the Qur’an (Batır & İnce, 2023: 98-119). Although the people interviewed in this study went through the same education process, they have different views on earthquakes. These results also reflect that people sit in the web of meaningfulness that they weave and interpret the facts in this network of meaningfulness (Geertz, 2010: 21). According to the findings of the research, people make their interpretations based on their beliefs.

This study analyses people’s association and their explanation of earthquakes in relation to symbols found in the mythological narratives of various societies through the lens of interpretive anthropology. As Altuntek underlines, interpretive anthropology examines how people assign meaning and interpretation to the things and events around them, and how they create shared communicative worlds or cultural systems of meaning (2009: 114-115). In this context, objects associated with earthquakes in different cultures will be interpreted.

## **1. Earthquakes in antiquity**

Earthquakes have been experienced since the early periods of Anatolia. It is possible to find traces of it in the drawings of the Neolithic Age settlers of Çatalhöyük (6200 BCE). (Karagöz, 2005: 9). It has been documented that earthquakes were also recorded after the use of written sources was introduced.

Starting in the sixth century BCE, new ideas emerged that did not attribute earthquakes to the actions of divine forces. These views are known to have spread across Anatolian lands. The first view of the formation of earthquakes was put forward by Thales, according to whom the land on earth rested on waters. Earthquakes occurred due to the movement of land floating

uncontrollably on the water due to wind and other reasons. This view of Thales was opposed by his close friend Anaximander, who argued that the world looked like a drum and that the land masses did not stand on anything. According to Anaximander's view, the earth, which looks like a drum, has a very heavy mass and earthquakes occur because this mass collapses into itself and due to the mobility during the collapse. According to Aristotle, large and small cavities in the world have been formed, and the changes formed by these cavities lead to earthquakes (Övünç, 2019: 7-13). Aristotle's views seem to support Anaximander's claims.

Earthquakes have caused significant destruction and changed the population structure of the settlements. B.C. The "earthquake storms" that took place in the thirteenth century caused the destruction of the Bronze Age. It is also suggested that earthquake storms cause the migration of sea peoples. In Anatolia, Mesopotamia, North Africa, and the Minoan period, very large earthquakes occurred in 1470-1450 BCE around Crete, half of the island was torn apart and earthquake waves occurred (Braudel, 2007: 23). Entire settlements on the Mediterranean coast, such as palaces and other structures in Crete, were destroyed by earthquakes. As a result of the earthquakes in these regions and the destruction they caused, the migrations of sea peoples caused the collapse of many civilizations (Yıldırım & Nişancı, 2023: 112-136). Several Hittite cities were also affected by great destructions. The destruction of Hittite cities in Anatolia at the beginning of the twelfth century BCE is attributed to earthquakes (Braudel, 2007:23).

According to environmental records, earthquakes and tsunamis occurred in ancient and prehistoric times. In the National Oceanic and Atmospheric Administration (NOAA, 2018) database, there are many references to earthquakes from around the world. Although there are references to earthquakes in many parts of the world, records of earthquakes that occurred in the Mediterranean during the Classical and Late Antique periods have been documented. In East Asia, Japan, Korea and China, there are detailed historical records of seismic activity and some tsunamis. In other parts of the world, where there are no records of earthquakes, it is seen that there are no historical texts that continue to be understood as earthquake records due to the lack of historical records and/or the loss of historical texts (Liritzis, Westra & Miao, 2019: 1307-1330).

## **2.Earthquakes in mythological narratives**

The terms "mythos" and "mythology" are often associated with sacred or religious in nature. It is used for narratives about the origin or occurrence of a natural, supernatural or socio-cultural phenomenon that is social rather than individual. Perceiving, shaping, and symbolizing the world is, in essence, a reflection of human life and the events surrounding it. According to the paradigm of meaning, myth is a way of thinking, a state of thought. In this sense, myth is the reality about the world itself and arises as a result of dialectical logic. Therefore, in mythological time, all the facts of life are perceived with mythological consciousness. Myths are not only a means of interpreting ancient times but also a framework that influences the environment, society, and human behaviour of people. They are passed down through generations, conveyed in symbols within oral culture.

Bayat considers mythology as a dynamic system of signs that explain the formation of the world and the formation of vehicles. Myth always encounters the reality of life that concerns human beings at any point and explains it in a unique and quite striking way (Bayat, 2005: 4). Therefore, many events such as the beginning of hunting, tool making, food production, agriculture and animal husbandry, family, regulation of male-female relations, conflict and reconciliation, and natural disasters find their counterparts in myths. Myth is a “code” that confronts us with the past (Atay, 2016: 50). Myths are also seen as a complex cultural reality that can be interpreted according to multiple and complementary perspectives (Eliade, 1993: 18). In the content of myths, there are narratives from early societies that describe the actions and discourses of the gods, as well as moral teachings. Due to these arrangements, which are necessary for every society, the meanings of mythological elements and their symbolic objects are reproduced in every culture. Due to the reproduction of mythological narratives, analyzing their meanings is becoming increasingly complex and difficult to interpret as they are layered on top of each other in every society and in every period (Bulut, 2020: 161).

Mythology presents events in an extraordinary manner to explain stories or origins believed to be sacred. According to Eliade, myths form the foundation of social life for people in archaic societies. While explaining people’s lives, he associates the idea of “myth” with the understanding of “sacred activity”, “meaningful movement” and “primordial event” (Eliade, 2005: 397-490). In this sense, myths are revealed through symbols how supernatural beings bring a reality to life, whether it is acts of creation or other activities. In this sense, myth is the story of a creation. In the story of creation, it is told how it began to exist with the explanation of the starting point in creation.

In every society, explanations about the universe, natural and supernatural worlds, and the meaning of human place and existence in all these, past and future are passed on from generation to generation through myths (Bulut & Sezener, 2019: 3071–3081). Myths also explain natural phenomena, particularly those whose mysteries remain unsolved by humans and are thus considered frightening. Just as mythology addresses the creation of man and his environment, it also grapples with the destruction of that environment. Various interpretations have emerged in response to natural events such as earthquakes, volcanic eruptions, melting glaciers, plagues, famine, and droughts. Eschatological myths include narratives that address such destruction. The term “eschatology” derives from the Greek word *eschatos*, meaning “end.” Eschatology concerns the ultimate events in the world or in human history (Sharpe, 2000: 24). In this sense, eschatology refers to the narration of the ‘last things’ events marking the end of the world or its destruction (Bultmann, 2006: 29). For example, in Greek mythology, the emergence of chaos occurs when the crimes committed by the sons of Lykaon reach Olympus. Zeus visits people who are said to be sinners in disguise to see these crimes on the spot. When he returned to Olympos, he thought that barbarism had engulfed all humanity and decided to destroy all of them (Gravers, 2010: 174).

Eschatology myths are also considered a belief system. In this context, it is the mythical aspect of the beliefs developed about the end of the universe and life. In other words, they are the myths of the eschatological elements in theology. In the language of traditional theol-

ogy, eschatology is the doctrine of last things. It refers to the irreversible end in the process of the flow of the end time. At the same time, the end is approaching as the end of the world, and therefore the future of our time (Bultmann, 2013:24). In eschatological myths, both good and bad are mutually reinforcing. The healing that will come after a destruction brings hope (Eliade, 2005: 198). The most important premise in eschatology is the mythical aspect of the beliefs formed in people about the end of the universe, the world and life. The apocalypse occurs with the events that will occur when the end of the world and life comes. Myths of the afterlife constitute the subject of eschatology myths (Çınaroğlu, 2008: 42). In this sense, earthquakes are considered within eschatological myths.

### **3. Mythological interpretations of earthquakes in different cultures**

The interpretation of seismic movements in history is often reflected in mythological narratives, whereby the symbols used in the interpretation of the causes of earthquakes are related to the physical environment. These symbols and interpretations, however, often transcend cultural boundaries, making it possible to find similar narratives in different societies. It is believed that it is formed by the movement of the animal, which is sometimes believed to be standing on the earth. Sometimes it is explained that earthquakes occur as the animal moves its head. The type of animals may vary depending on the region where they live. There are also societies that use the same animal symbols. According to Aşçı et al., the animals are elephants in India, wild boars in Mongolia, giant spiders in Japan, and oxen heads in Anatolia (Aşçı, Oymak & Çabaş, 2017: 59-72).

The authors also note that in Greek mythology, an earthquake occurs when the god Poseidon (the god of the sea and rivers) imprisons the giant Polybotes on the island of Kos and smashes the rocks and covers them. This narrative is consistent with the legend of Kos, a volcanic island. In ancient Chinese civilization, earthquakes are a harbinger of the need for a change of government (Aşçı, Oymak & Çabaş, 2017: 59-72). In Mesopotamia, earthquakes are caused by people's failure to fulfil their duties to the gods. It is believed to have been carried out by the god Ea/Enki (Erdem, 2020: 74).

In mythology, the most famous and first divine character associated with earthquakes is Poseidon, who makes the earth/seas tremble. As the god of earthquakes, Poseidon is the one who surrounds the earth and shakes the earth (Turak, 2018: 35-48). Earthquakes occur as Poseidon gets angry and strikes his trident to the ground. He destroys cities by stabbing his wilderness one after another. Poseidon is also known as the ruler of seas, lakes and rivers. Its equivalent in ancient Rome is "Neptunus". It is among his duties to guide and help sailors and to produce salt (Cömert, 2010: 64-65). Poseidon is also a wild, harsh, ruthless god who creates floods, and tsunamis with giant waves (Erel & Zabcı, 2007: 71-79).

In the Nordic earthquake narratives, Loki stands out. Loki is the Norse god, who causes the earthquake against his will. With his power, Loki takes actions that will bring about the end of the world. Loki kills Balder, the son of Odin and Frigg, the apple of the gods' eye (Page, 2017: 87). Those who want to avenge Balder go after the gods Loki. Loki escapes and

builds a small, secluded house over the sea and on the side of a high mountain. However, he does not have a peaceful life. Loki constantly watches the surroundings through the doors of the house, which open in all four directions, for fear of being caught. Sometimes he hides in the waters disguised as salmon. Wanting to avenge Balder, the gods track down Loki. When Loki disguises himself as a fish, they catch him with the help of a net. They take Loki to a deep and dark cave in the mountain, tie him to a chain, and hang a huge snake with poison flowing from its mouth. Poison drips from the snake's mouth constantly on his face. Loki, disguised as a salmon, causes earthquakes that shake the earth every time he stirs with the enormity of the pain he feels. His son and wife follow the tremors and find Loki. However, they are powerless to break the chains bound by the divine powers. His wife tries to make his captivity more bearable by holding a stone over Loki's head. Thus, he manages to calm Loki down and reduce earthquakes. However, when it is full and his wife goes to evacuate, the poison dripping from the snake burns his skin very violently. Loki writhes in pain in a way that shakes the whole world (Etter, 2011: 98). Loki, who is released when the rocks he is attached to crumble, uses his power to turn the world into a battlefield (Wilkinson, 2014: 96-98). Monsters, gods, giants, war, destruction, all hell breaks loose. The known world disappears; Angry flames destroy everything left over from earthquakes, and the earth turns into a desert (Güleç, 2018: 162-179).

The myths associated with Loki's suffering when he disguised himself as a fish are included in the myth of eschatology. In Norse creation stories, the fish motif plays an important role. After God created the earth, He attached it to a fish. It is believed that earthquakes occur when the fish turns from one side to the other. In some parts of Scandinavia, it is believed that the fish lies by curling up in a ring and clenching its tail with its teeth while holding the earth. Earthquakes occur when the fish releases its tail. The fish symbol, which is believed to cause earthquakes, is also seen in Turkish and Eastern mythologies. A Turkish text compiled by Verbitsky mentions a fish with its head turned north (into the dark). Earthquakes occur as the fish changes direction (as cited in Öksüz, 2021: 65).

In the belief of the Kai people of New Guinea, Malengfung, the Creator, withdrew to the horizon at the edge of the Earth after creating the cosmos and humanity, where he fell into a deep sleep. However, every time he turns in his sleep, the ground shakes. But there will come a day when Malengfung will rise from where he lies and shatter the sky, the sky will fall on the earth and shatter, and the creator Malengfung will end all life, thus ending life (Eliade, 1995: 79).

In Turkish mythological narratives, the earthquake is associated with Katay Khan, or in some renderings as Kaday or Kıtay (Kiday), who is considered as the God of Earthquakes in Turkish and Altaic mythology. Katay Khan, also known as the Blacksmith God, creates an earthquake with his 40-horned bull. When this bull becomes agitated, it stomps its feet on the ground, causing slight tremors. Its heavy breathing through its nose generates not only small vibrations but also faint earthquake-like sounds. When he gets even hotter, he puts his horns in the ground and shakes the earth. Their grunts create the noise of the earthquake (Karakurt, 2011: 124).



According to Akman (2012), in the folk image of the occurrence of earthquakes, the world stands on the horns of a yellow ox. Earthquakes occur when the yellow ox moves for any reason. This ox is on a stone, the stone is on the back of a fish, the fish is in the water, the water is in the air. This ox is given names such as Gâv-ı Zemin, Sevr-i Ahmer and Behmut (Uraz, 1994: 19). It is possible to attribute the legend that the world stands on ox horns in Ottoman creation narratives to the same root (Esin, 2001: 72-74). The sky rests on four poles, located in four cardinal directions; the earth is surrounded either by an ocean river or by a mountain range, which may have been noticed in the eighth century in the Tonyukuk inscription; it is carried by a tortoise or the horns of a bull, whose movements cause earth tremors (Roux, 2000: 602). According to the Teleüt Turks in the north of Altai, the world, which looks like a plate, is carried by four oxen on all four sides. In another Turkish epic, oxen carry the world resembling a tented grass (Ögel, 2014: 321). Among the Kyrgyz Turks, on the other hand, there is a large ocean underground with a thick layer of clouds over it. There is a rock on the cloud, and a gray ox on the rock. The world stands on this ox (as cited in Ögel, 2014:32). Mythological narratives are reality, and this reality is told through symbols. According to Altun and Çınaroğlu, Central Asia is not located in an earthquake zone. Therefore, it is possible to state that the effects of Sumerian and Babylonian mythologies and the biblical tradition are the basis of the flood myths of the Turks (Altun & Çınaroğlu, 2020: 28-40).

The association of earthquakes with bulls is also found in the mythological narratives of Iran. In Iran, especially among the elderly living in rural areas, it is believed that the earth stands on the horns of a bull sitting on a fish in the sea. When the bull is tired or when injustice and sin increase in the world, the bull becomes impatient. It shifts the Earth from one horn to the other. As a result of this action of the bull, earthquakes occur. It is believed that great earthquakes occur when the earth falls from its horn as a result of the movement of the bull (Berberian, 2014: 99-104).

Other narratives from more remote lands, such as the New Philippines have been reported. On the island of Namolut, one of the Caroline islands known as the New Philippines, various myths are known that the gods will one day destroy all of humanity due to the sins of humans. In these myths, even if humanity is destroyed, the gods will continue to exist (Eliade, 1995: 79). Besides, in Japanese mythology, there are unique narratives about earthquakes. According to a belief that has been popular since the sixteenth century, an earthquake is caused by a giant cat or catfish living underground. This catfish, called "Namazu", carries the islands of Japan on its back. This fish is under the control of a demigod named "Take-mikazchi". God holds the head of the fish under a heavy stone to prevent it from moving. However, when the god is distracted, the fish moves. With this movement of Namazu, strong earthquakes occur. Most people are afraid of Namazu but they still believe that it will bring material wealth. The legend of the catfish has become widespread, especially in times of aggravated economic conditions. Prayer is described in a way that represents the renewal of the world, where the poor will take the gold of the rich (Ashkenazi, 2003: 220-221).

In Roman mythology, Luplter decides to destroy all of humanity due to the evil of humans. Luplter first wants to set the world on fire, then abandons this decision. Later, Luplter



sets heaven on fire and punishes the world with a flood. It occurs in all places with severe storms, floods and earthquakes. Thus, all people in the world lose their lives as a result of Luplter's punishment (as cited in Kubat, 2020: 221-244).

According to M. Sever, states that in Chinese and Indian mythology, the world is considered an imaginary being and stands on the tortoise. According to Chinese mythology, the heavens are hemispherical, while the earth is quadrangular (Şimşek, 2022: 49-79). In Indian mythological narratives, India is depicted as a land rich in symbols with deep cultural significance. In Indian mythology, the earthquake is associated with the earth being held by four elephants standing behind a tortoise, and the tortoise is balanced on a cobra. When any of these animals move, the earth trembles and shakes. Çoruhlu states that the turtle symbolism was seen in ancient Chinese and Indian mythologies. In Indian imaginations, there is a snake that holds the world above the sea along with the turtle. In Hinduism, it is accepted that there is a thousand-headed snake under the lowest layer of the earth (2002: 99).

The turtle is a symbol of strength, wisdom, patience, endurance and longevity. According to the Altaic-Turkish-Mongolian communities, a golden tortoise carries a mountain in the middle of the universe on its back. The turtle, which is disturbed by the sun, lies on its back and this brings the end of the world (as cited in Aksoy, 2022: 56-72). Eliade argues that myth had functions that expressed beliefs and explained moral principles for primitive civilizations (1993: 34). He emphasizes that myths do not consist of an empty series of events.

Natural disasters are associated with earthquakes, that is, myths of eschatology, myths of re-creation. According to Bayat, mythology is the interpretation of beginning and end, that is, eschatology and creation, in other words, cosmogony and eschatology (Bayat, 2007: 120). In fact, it is not possible to distinguish between the myths of cosmogony and eschatology with sharp lines. The myths of eschatology speak of both an end and destruction, as well as a new beginning, or cosmogony. Eschatology includes narratives about the end of things and their return to the beginning. Thus, it represents a cycle where destruction occurs as the cycle starts anew (Eliade, 1993: 75-76). Therefore, all the myths of eschatology are directly related to the myths of cosmogony. Because cosmogony is creation myths. Therefore, even if the world comes to an end with the myths of eschatology, a new world can be established with a new creation.

## **Conclusion**

The term mythos and mythology is usually sacred or religious in nature. It is used for narratives about the origin or creation of a natural, supernatural, or socio-cultural phenomenon that is more social than individual. On the other hand, in the paradigm of values, it is perceiving, shaping, symbolizing the world, to put it briefly, it is the reflection of life and events. According to the paradigm of meaning, myth is a way of thinking, a state of thought. In this sense, myth is the reality about the world itself and arises as a result of dialectical logic. Therefore, in mythological time, all the facts of life are perceived with mythological consciousness. Myths are not only a branch of science that interprets ancient times, but also

the science that controls the environment, the society we live in, and the behaviour of people, and is transmitted from generation to generation through symbols within oral culture.

An earthquake is an environmental event that occurs when fault lines break. However, the occurrence of earthquakes has mostly been interpreted culturally by societies, especially in periods when science has not yet been able to explain this natural phenomenon . Although almost no human contribution has been made to the occurrence of earthquakes, which are natural disasters, the occurrence of earthquakes has been associated with the behaviour of people. Earthquakes have been tried to be explained through myths constructed through different symbols in different societies. In mythological narratives, on the other hand, symbols include explanations of the origin of a sacred, social, and more natural, supernatural, or socio-cultural phenomenon. In other words, myths tell how reality comes to life.

Earthquakes have deeply affected human life since ancient times. The occurrence of events that people could not cope with and that affected them very much was attributed to divine causes. Mythological narratives include explanations about the causes of earthquakes Interpretation of earthquakes in cultural values; It can vary depending on each society's own experiences, beliefs, and history. Like all natural disasters, earthquakes have an important place in mythological narratives with symbols developed depending on the physical conditions of the settlements where societies live. In narratives, earthquakes are often interpreted as the anger of the gods or the movement of supernatural forces. In mythological narratives, it is also stated that earthquakes are a warning message sent by the god or gods to humanity. Moreover, beyond the warning, it was also seen by the immortals as a kind of means of punishment for humanity.

Although the causes of earthquakes are scientifically understood today, individuals who believe that earthquakes occur as a form of divine punishment are still encountered. Earthquakes are particularly associated with societal deviation or the desecration of the sacred. It can be argued that interpretations found in mythological narratives are being reinterpreted and reproduced within the framework of monotheistic belief systems.

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## References

- Akman, E. (2012). The “yellow/red bull” Belief in the Turkish mythology and folk poetry. *Journal of Turkology*, 22(1), 1-16. <https://doi.org/10.18345/tm.77404>
- Aksoy, E. (2022). Mythological analysis of the tortoise figure and its use in Anatolian weavings. *Van Yüzüncü Yıl University Journal of Social Sciences Institute* (55), 56-72. <https://doi.org/10.53568/yyusbed.1111578>
- Altun, I., & Çınaroğlu, M. (2020). “The end times” phenomenon and eschatologia mythe. *Millî Folklor*, (128), 28-40.
- Altuntek, N. S. (2009). *Yerli'nin bakışı, etnografya: kuram ve yöntem*. Ütopya.
- Arıkan, Y. (1998). It's about Hittite Mythology. Development of Social Sciences in Turkey and Faculty of Language, History and Geography Symposium Proceedings. Ankara University.
- Armstrong, K. (2018). *Mitlerin kısa tarihi* (D. Şendil, Trans.) Alfa.
- Ashkenazi, M. (2003). *Handbook of Japanese mythology*. ISBN 1-57607-467-6; 1-57607-468-4 (e-Book).
- Aşçı, M., Oymak, R. & Çabaş, Z. (2017). Ground vibration (earthquake) of earth surface in Turkish. *Turkish Studies International Periodical for the Languages, Literature and History of Turkish or Turkic*, 12(21), 59-72.
- Atay, T. (2016). *Din hayattan çıkar*. (6th ed.) İletişim.
- Batır, İ. & İnce, C. (2023). The views of religious officials on earthquakes as a type of disaster. *Journal of Bitlis Islamic Studies*, 5(2), 98-119. <https://doi.org/10.53442/bider.vi.1382052>
- Bayat, F. (2005). *Mitolojiye giriş*. Karam Araştırma ve Yayıncılık.
- Bayat, F. (2007). *Türk mitolojik sistemi: ontolojik ve epistemolojik bağlamda Türk mitolojisi 1*. Ötüken.
- Berberian, M. (2014). Earthquake folklore and legends. in *Developments in earth surface processes*, (pp. 99–104). <https://doi.org/10.1016/b978-0-444-63292-0.00005-3>
- Bokhari, S. S. S. & Masood, M. T. (2018). Study of mythology: In the context of structuralists theoretical framework. *International Journal of Applied Research*, 4(2), 91-94.
- Braudel, F. (2007). *Bellek ve Akdeniz: tarih öncesi ve Antik Çağ* (A. Berktaş, trans). Metis.
- Bultmann, R. (2006). *Tarih ve eskatoloji* (E. Kuşçu, Trans.) Elis.
- Bultmann, R. (2013). *Mitoloji ve hermenötik sorunu* (C. Batuk & E. Kuşçu, Trans.). Eskiyei.
- Bulut, A. & Küçükefe, B. (2019). Ticaret, ekonomik durum ve mitolojideki yansımaları. In O. Şimşek (Eds.) *Uluslararası poli ti k iktü satta tari hsel ve güncel tartışmalar*. Gazi, pp. 215-233.
- Bulut, M. & Sezener, A. (2019). The story of sedentary life from Dumuzi-Enkimdu to Kabul and Abel. *Turkish Studies*, 14(6), 3071-3081. <https://doi.org/10.29228/TurkishStudies.23495>
- Bulut, M. & Öztekin Alpaydın, M. (2004). Anlam ve eylem bakımından tarihsel perspektiften şiddet kavramının algılanışı ve dönüşümü. In *Kadına karşı şiddet içeren eylemleri suçları işleyenlerin kriminolojik profili*. Özel Ofset, pp.156-199.
- Çınaroğlu, M. (2008). *The invesment about eschatology myths history at Turkish culture*. (Unpublished MA thesis, Kocaeli Üniversitesi). Kocaeli Üniversitesi Sosyal Bilimler Enstitüsü.
- Çoruhlu, Y. (2002). *Türk mitolojisinin ana hatları*. Kabalıcı.
- Cömert, B. (2010). *Mitoloji ve ikonografi* (3. Eds) De Ki.
- Eliade, M. (1993). *Mitlerin özellikleri* (S. Rifat, trans). Simavi.

- Eliade, M. (2005) *Dinler tarihi (İnançlar ve ibadetler morfolojisi)*. Serhat.
- Emiroğlu, K. & Aydın, S. (2009). *Antropoloji sözlüğü*. Bilim ve Sanat.
- Erdem, F. (2020). *The tradation of divination in the ancient Mesopotami* [Unpublished Doctoral Thesis] Pamukkale Üniversitesi Sosyal Bilimler Enstitüsü.
- Erel, T. L. & Zabcı, C. (2007). Poseidon, the god of the sea, who makes earthquakes. *Journal of Archaeology and Art*, 126, 71-79.
- Esin, E. (2001). *Türk Kozmolojisi'ne giriş*. Kabalıcı.
- Etter, R. J. (2011). *A devotional: honoring Thor and family*. Lulu Enterprises.
- Geertz, C. (2010). *Kültürlerin yorumlanması* (H. Gür, Trans.) Dost.
- Gravers, R. (2010). *Yunan mitleri* (U. Akpur, Trans.) Say.
- Güleç, Ç. (2018). Coğrafya eğitiminde mitolojinin kullanılması. *Eğitim ve Toplum Araştırmaları Dergisi/JRES*, 5(1), 162-179.
- Karagöz, Ş. (2005): *Eskiçağ'da depremler*. Ege.
- Karakurt, D. (2011). *Türk mitoloji ansiklopedisi: Türk söylence sözlüğü*. ISBN: 978-605-5618-03-2. E-kitap.
- Gluckhohn, C. (1959). Recurrent themes in myths and mythmaking. *Daedalus*, 88(2), 268-279.
- Kubat, L. (2020). Flood description and reflections in art. *IBAD Journal of Social Sciences*, 2020(6), 221-244 <https://doi.org/10.21733/ibad.637382>
- Liritzis, I.; Westra, A. & Miao, C., (2019). Disaster geoarchaeology and natural cataclysms in world cultural evolution: An overview. *Journal of Coastal Research*, 35(6), 1307–1330. <https://doi.org/10.2112/JCOASTRES-D-19-00035.1>
- Ögel, B. (2014). *Türk mitolojisi II* (5. Eds.) Türk Tarih Kurumu.
- Öksüz, G. (2021). *Ana hatlarıyla Rus mitolojisi*. Çeviribilim.
- Övünç, Ş. (2019): “Theories about the occurrence of earthquakes from Antiquity to the Middle Ages”. *Mavi Gezegen*, 27, 7–13.
- Özey, R. (2006). *Afetler coğrafyası*. Aktif.
- Page, R. I. (2017). *İskandinav mitleri* (3. Eds.). (İ. Yılmaz, Trans.) Phoenix.
- Roux, J. P. (2011). *Eski Türk mitolojisi* (M. Y. Sağlam, Trans.) Bilge Su.
- Sharpe, E. J. (2000). *Dinler tarihinde anahtar kavramlar* (A. Güç, Trans.) Arasta.
- Şahin, K. & Ağbaht, F. (2021). Representation of Daphne and Apollo myth in postmodern consumption. *Turkish Studies-Language*, 16(4), 2543-2560. <https://dx.doi.org/10.7827/TurkishStudies.52316>
- Şahin, K. & Öz, A. Ş. (2022). Antik Yunan Mitlerinin İzinde: Engellilik Algısına Dair Bir Okuma. In İ. Kalaycı, G. Kalmış, & C. Aydeyer (Eds.) *Tarih-kültür ve medeniyetten izler*. Kitap Dünyası, pp. 21–50).
- Şimşek, E. (2022). Türk Halk Kültüründe Kaplumbağa. In D. Ayaz, E. Akçiçek, & H. Arkan (Eds.) *Kaplumbağalar*, Vol. 7, Ege Üniversitesi Yayınları Çevre Sorunları ve Araştırma Merkezi, pp. 49-79.
- Turak, Ö. (2018). Bull and trident: An investigation of the origin of Poseidon. *MASROP*, 12(1), 35-48.
- Tümertekin, E. & Özgüç, N. (1997). *Beşeri coğrafya insan-kültür-mekân*. Çantay.
- Wilkinson, P. (2014). *Efsaneler ve mitler* (E. Lakşe, Trans.) Alfa.

Yıldırım, K. & Nişancı, H. (2023). Earthquakes in Anatolia from antiquity to the 10th century. *Journal of Eurasia Dossier*, 14(1), 112-136.

### Electronic resources

Ekşi Sözlük, 27 January 2019. <https://eksisozluk.com/17-agustos-depremi-efsaneleri--5920029?p=10>  
Ekşi Sözlük, 1 June 2022. <https://eksisozluk.com/17-agustos-depremi-efsaneleri--5920029?p=10>  
Ekşi Sözlük, 1 June 2022. <https://eksisozluk.com/17-agustos-depremi-efsaneleri--5920029?p=10> You  
Tube, 13 March 2023. <https://www.youtube.com/watch?v=ckkGAJ3naFQ>



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# **An Overview of the Psychological Effects of the Earthquakes in Türkiye through Five Stories**

**Türkiye’de Yaşanan Depremlerin Psikolojik Etkilerine  
Beş Öykü Üzerinden Bir Bakış**

**Tülin Arseven\***

## **Abstract**

The number of earthquake-themed literary texts in Turkish literature is inversely proportional to the frequency and impact of earthquakes in Türkiye. This study examines earthquake-themed stories in Turkish literature regarding the effects of earthquakes on human psychology. Economic losses caused by earthquakes are, of course, an essential issue. It is also natural to deal with this issue in literary texts. The psychological impact of earthquakes is as crucial as economic losses. On the other hand, few literary texts deal with the psychological effects of earthquakes. Accordingly, few stories have been written about the psychological impacts of the earthquake, most of which are about the 1999 Gölcük earthquake. The Gölcük earthquake caused extensive damage with economic and psychological consequences. This study is based on qualitative research, whereby five stories written after the 1999 Gölcük Earthquake were selected using the purposive sampling method. The stories (How I Fell Out of Bed, The Wrong Person, Dear

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Hate, Without Breaking Faults, and Benefactors) were analysed by focusing on the inquiry of which aspects of the stories address the psychological problems caused by the earthquake on individuals. The selected stories have different characteristics in terms of genre and format. The stories belong to Orhan Duru, Mebuse Tekay, Hakan Şenocak, Ahmet Ümit and Barış Bıçakçı, who are renowned authors of recent Turkish literature. In the selection of the story, I paid attention to the stories dealing with different aspects of individuals' inner world. As a result of the analysis, the destructive effects of earthquakes on people's mental and spiritual health were determined showing that short-stories, as an important literary genre helps us understand and empathize with people who survived an earthquake.

**Keywords:** *earthquake, short-story, Turkish literature, Türkiye, Gölçük*

## Öz

Türk edebiyatında deprem temalı edebî metinlerin sayısı, Türkiye’de yaşanan depremlerin sıklığı ve etkileri ile ters orantılıdır. Deprem konulu edebî metinlerin büyük bölümü, depremin ekonomik sonuçlarını tartışmaya açmaktadır. Depremin neden olduğu ekonomik kayıplar elbette önemli bir sorundur ve bu konunun edebî metinlerde ele alınması da doğaldır. Ancak depremlerin bireyin psikolojisi üzerinde yarattığı etki de ekonomik kayıplar kadar önemli bir konudur. Buna karşın depremlerin bireyin psikolojik durumuna etkisini ele alan edebî metin sayısı azdır. Buna bağlı olarak depremin psikolojik etkileri hakkında yazılmış az sayıda öykü vardır. Bu öykülerin de büyük bölümü 1999 Gölçük depremi hakkındadır. Gölçük depremi, çok büyük can ve mal kaybına yol açmış ve ekonomik ve psikolojik açıdan önemli sonuçlar doğurmuştur. Bu çalışma, depremin insan psikolojisi üzerindeki etkilerine ilişkin Türk edebiyatında yer alan deprem temalı öyküleri inceleyen nitel bir araştırmadır. Bu çalışmada örnek olarak seçilen beş öykü analiz edilmiştir. Amaçlı örnekleme tekniği kullanılarak 1999 Gölçük Depremi sonrasında yazılmış ve odağına Gölçük depreminin psikolojik etkilerini alan beş öykü seçilmiştir. Seçilen öyküler, tür ve biçim yönünden farklı özellikler taşımaktadır. Öyküler, son dönem Türk edebiyatının önemli yazarları olan Orhan Duru, Mebuse Tekay, Hakan Şenocak, Ahmet Ümit ve Barış Bıçakçı’ya aittir. Öykü seçiminde öykünün bireyin iç dünyasının farklı yönlerini ele almasına dikkat edilmiştir. Öyküler (Yataktan Nasıl Düştüm, Yanlış İnsan, Sevgili Nefret, Faylar Kırılmadan ve İyilikseverler), depremin bireylerde yarattığı psikolojik sorunların metinlerde hangi yönleriyle ele alındığı sorgulamasına odaklanılarak analiz edilmiştir. Analiz sonucunda depremlerin insanların ruh ve akıl sağlığı üzerindeki yıkıcı etkileri tespit edilmeye çalışılmıştır. Öykü türünün, depremi yaşayan insanların duygu durumlarını anlamada ve empati kurmada önemli bir rol oynadığı tespit edilmiştir.

**Anahtar sözcükler:** *deprem, öykü, Türk edebiyatı, Türkiye, Gölçük*

## Introduction

Earthquakes, especially those that are very severe and cause loss of life and property, have various psychological effects on people. These effects are much more visible on those who experience the earthquake themselves. The people of a country where the earthquake occurs

are affected by the earthquake to a greater or lesser extent in various ways. Türkiye is located on the Northern Anatolian Fault Line (Ketin, 1969: 1), Eastern Anatolian Fault Line (Arpat & Şaroğlu, 1972: 44), and Western Anatolian Fault Line (Şaroğlu and Güler, 2020: 163). Due to these fault lines, earthquakes with a magnitude exceeding 7 on the Richter scale are observed in Anatolia. The Gölcük Earthquake of 17 August 1999 was Mw 7.4 (Südaş, 2004: 74), and the Kahramanmaraş earthquakes of 6 February 2023 were Mw 7.7 and Mw 7.6 (Nemutlu et al., 2023: 1224). According to official figures, 17,479 people died in the Gölcük earthquake (Özmen, 2000: 88) and more than 48,000 people died in the Kahramanmaraş earthquakes (Presidency of the Republic of Türkiye, 2024).

Earthquakes can cause some psychological problems as well as fear and anxiety on people. Literary texts deal with natural disasters from many different perspectives. Authors sometimes take refuge in literary texts with the intention of therapy. Some literary texts also aim to raise awareness about earthquakes. In those texts, earthquakes are scrutinized by social, psychological, and economic perspectives before and after the earthquake. The object of this study is the stories about earthquakes. A small number of earthquake-themed stories were identified in the literature review process and they were classified in terms of their thematic ways they deal with earthquakes. In some stories, an earthquake is only a symbol of destruction and is only a background for narrating the main event or situation. Some of the stories describe the moment of the earthquake and the great horror experienced. Others deal with the inadequacy of pre-earthquake preparations and the social, economic, and psychological problems experienced after the earthquake. The psychological dimension of the issue is mostly ignored.

The study focused on the universe of earthquake-themed stories that emphasise the psychological effects of earthquakes. This study is based on qualitative research because according to Erickson, qualitative research aims to discover and define what certain people do in their ordinary lives and what their actions mean to them (2011: 43), which reflects the nature of the present study. The present study has elaborated on the selected 5 stories in terms of their divergent methods to deal with different aspects of the psychological effects of the earthquake. The researcher has analyzed the chosen stories within the scope of theme-based, descriptive, and content analysis using qualitative data analysis methods. Bryman suggests that the sample is a subset of the population selected for research and can be based on probability or a non-probability approach (2008: 168). This study is based on the purposive sampling criterion technique. I analyzed five stories written after the 1999 Gölcük Earthquake in line with the criterion sampling technique of purposive sampling. Creswell argues that the purposive selection of participants represents an essential decision point in qualitative research (1998: 120). A case study is the analysis of a “limited system” or an example through detailed, in-depth data collection involving multiple sources of context-rich information (Creswell, 1998: 61). The stories selected for analysis are as follows: *Yataktan Nasıl Düştüm / How I Fell Out of Bed, Yanlış İnsan / The Wrong Person, Sevgili Nefret / Dear Hate, Faylar Kırılmadan / Without Breaking Faults* and *İyilikseverler / Benefactors*. The results of the analysis of five stories have

illustrated the effects of earthquakes on human psychology. The study has shed light on the destructive effects of earthquakes on people within the narrative universe of the selected five stories.

Some researchers have indicated that the number of the stories written about earthquakes is not quantitatively compatible with the reality of earthquakes in our country (Yüksel, 2013: 11). The psychological dimensions of earthquakes deeply affect individual and social life. Earthquakes shake people's sense of security by threatening life from various aspects. That causes great fear in people. As stated by Hofmann and Dibartolo, fear is an unpleasant but natural emotional reaction to danger and threat (2007: 92). The smell of death is so effective that it forms the basis of many fears (Kalyoncu, 2011: 31). Fear is the emergence of natural and universal anxiety in humans due to a veritas situation, event or person. The natural and social conditions and culture in which people live affect the emergence of fear. Therefore, fear is a learned emotion (Burkovik, 2004: 140), and it captures people and affects their vital decisions. It even causes physical complaints that can make people sick (Hennenhoefer & Heil, 2011: 7). Threats, severe insults, torture and similar events, natural disasters, and wars may cause panic attacks. The person may suddenly return to his past pains and traumatic moments with a sound, image, or any stimulus that reminds him of the events he experienced. Those exposed to earthquake trauma can experience that moment exactly (Kaya, 2007: 21). People may act or feel as if the trauma is happening again (Işık, 2006: 318). Ninan and Dunlop underline that people's memories are essential. Because past experiences enable us to predict what will happen in the future. That leads to anxiety.

Anxiety is conditioned fear and is a response to an expected and feared outcome. In the modern world, the threat is less physical and more often psychological (2007: 7). Köknel indicates that the only way to reduce and get rid of the anxiety caused by fears arising from past, daily life, or future concerns is to make them gain form and colour, be symbolized, and appear concretely. That naturally happens in dreams. Interpreting dreams reduces people's fears and anxiety, even if only for a short time. Mythological stories and fairy tales containing horror elements were replaced by horror stories and novels containing horror elements, which started in the seventeenth century, and this trend has continued increasingly until today (1992: 46, 47). Denis also offers a similar perspective on the relationship between fear and literary text. Denis remarks that people create situations that awaken foregone horrors and give us the pleasure of realizing that we have overcome them. Horror cinema, circus shows, and scary stories such as Grand Guignol allow reviving phobias, even for a short time, and experience the pleasure of overcoming them (2007: 13). As a means of expression, literary texts affect the writer and the reader. While it provides a kind of therapy for the writer, it also improves empathy in the reader. In this context, the present study examines a story written by five authors immediately after the earthquake of 1999. The focus of the investigation was to find out the psychological effects of the earthquake on the individual. It was seen that the five stories approached the psychological consequences of the earthquakes quite differently and drew attention to different aspects of the issue. The stories are examined in chronological order according to their publication dates.

## Analysing story sample

### 1. Anxiety caused by earthquakes

*Yataktan Nasıl Düştüm / How I Fell Out of Bed* is a story by Orhan Duru (İstanbul-1933; İstanbul-2009). It is included in the book titled *New and Hard Stories* (Yeni ve Sert Öyküler). The book was first published in 2001. In this situation story, the narrator describes the moment of the earthquake and his emotional state afterwards. The text is woven from a different point of view from many earthquake-themed stories. The story begins as follows: “At 03:00 in the morning on August 17, 1999, there was a big tremor. It did not bother me at all. Five days later, I fell out of bed while sleeping.” (Duru, 2022: 85). These sentences indicate the time of the situation described. The essential location of the fiction is not clearly indicated. The story, which presents a slice of the narrator-protagonist’s life, focuses on the impact of the earthquakes on the individual’s inner world. The narrator-protagonist, who initially responds to the earthquake with cold-bloodedness, is later psychologically upset.

The fear and uneasiness that other people felt during the earthquakes emerge in the narrator five days later. The cause of the fear is not the earthquake or death. It is the chaos created by the late reaction of the individual’s inner world. The narrator, who behaved calmly at the time of the earthquake, fell out of bed during sleep five days later, although a second earthquake did not occur. The narrator investigates the reasons for this. He looks for ways to get rid of the uneasiness he feels. However, he has not received any results. The story ends with information given by the narrator as a new development. Accordingly, the narrator dreams of an earthquake every night and says he feels all the aftershocks (Duru, 2022: 87). Orhan Duru, who feeds on contemporary reality in his recent stories, expresses the ordinary details of daily life (Memiş Baytimur, 2012: 9).

Duru emphasises that the lives of people who survived the earthquake without loss of life and property are somehow turned upside down. He describes the situation of a person experiencing a severe earthquake with the irony of falling out of bed. As illustrated in the studies published in the field of psychology, different reactions are observed in people experiencing trauma (Friedman, 2015: 118). Psychological and physical consequences of traumatic exposure worldwide constitute an essential public health problem (Friedman, 2015: 4). Various emotional, cognitive, physical, and social reactions such as fear, shame, self-blame, social isolation, and feeling insecure may be seen as acute stress reactions (Friedman, 2015: 118). Post-earthquake people may intensely suffer from negative memories of the earthquake, numbness, decreased interest in other people, isolation, avoidance of factors and situations that will remember the earthquake, and sleep disturbance, which are accepted as symptoms of stress disorder (Johannesson et al., 2011: 917). Due to the losses caused by natural disasters, the social network is disrupted, and psychopathologies such as post-traumatic stress disorder, anxiety, and depression can last for many years with different severity (Nakaya et al., 2024). *How I Fell Out of Bed* describes the effect of the trauma caused by the earthquake on the mental state of the person within the narrative order of the story.

## 2. Psychological problems seen in earthquakes victims

*Yanlış İnsan/The Wrong Person* was published in Mebuse Tekay's (Samsun-1954) storybook entitled *I was Never Like My Mother* (Annem Gibi Olmadım). The first publication year of the storybook was 2002. The date of writing is unknown. The text is a situation story consisting of two intertwined narratives. The first narrative constitutes the big frame. The second narrative is a diary placed within the larger frame. Both narratives have a unique fictionalisation. Both narratives are narrated in the first person. The story is about the Gölcük earthquake of 1999 and begins with the sentence: "I wanted it not to be forgotten..." (Tekay, 2002: 95).

The protagonist of the first narrative is a woman named Mine. The narration indicates that Mine received psychological support and wrote notes about her dreams in a notebook as part of her treatment. Immediately afterward, she received a diary in the mail. The following part of the story is in the form of quotations from the diary. The second narrative ends when the diary ends. The story and the first narrative end with the announcement of to whom the diary belongs, and the story is completed. The first narrative is ordinary and consists of Mine's reading a diary sent to her from Istanbul. The place in both narratives is Gölcük, as explained in the diary. From the note written at the end of the diary, Mine learns that Doğan died in a traffic accident. Doğan is a doctor from whom Mine received psychological support after the earthquake. The time of the first narrative is different from the time of the narrative in the diary. It is not possible to give a precise date for the first narrative. The note added at the end of the diary sent to Mine, the protagonist's story, is dated November 28, 1999. That is the date when the note was written. It is not clear how many days have passed since Mine received the diary. The person who wrote the note and sent the diary is the sister of Mine's doctor. The first narrative does not give any information about the Gölcük Earthquake.

The diary begins on 26 August 1999, approximately ten days after the Gölcük Earthquake of 1999. The first phrase is as follows: "It has only been six days since I came to Değirmendere;...". The entire diary describes the events that occurred between August 26 and October 6, 1999. The diary belongs to Doğan, who went to the region to help after the Gölcük earthquake.

In his diary, Doğan describes the conditions of Değirmendere and the earthquake victims. The diary describes the economic, social and psychological problems caused by the earthquake in a short, concise and striking manner. Mine and Doğan met because of the psychological support provided after the earthquake. The story discusses psychological problems in two channels. The first one focuses on Mine. The story's title (The Wrong Person) refers to the dramas in Mine's life. Mine's parents died when she was young. Mine believes that she should have died instead of her parents. According to Mine, children should die, not parents. That is because the parents may have other children. But when the parents die, the child is left alone. Mine's favourite friend Leyla passed away in the Gölcük Earthquake. Upon Leyla's death, Mine says: "If Leyla had lived instead of me, she would have new friends. The wrong person again" (Tekay, 2002: 112).

Although there is no clear statement in the story, Doğan's death in a traffic accident supports Mine's thesis that the wrong person died. Doğan's death is an essential loss for his patients and friends. The story also describes the emotional states of people trying to hold onto life among the ruins of the earthquake zone. The children's refusal to enter the tents out of fear and not leaving their parents' side (Tekay, 2002: 113) and the psychological trauma caused by the horrible event they experienced (Tekay, 2002: 108), people's getting used to fear (Tekay, 2002: 113) are narrated as embedded in the pages of the diary. At the core of the story is Mine's belief that her own life is less valuable than that of her loved ones and that if someone has to die, it should be her. Mine, an orphaned child, also lost her friends in the earthquake. The earthquake increases the fear of loneliness and the feeling of orphanhood. On the other hand, the story also mentions the problem of shelter among the problems of the earthquake region. Nakaya et al. revealed in a study that the need for shelter that emerged after the earthquake had adverse psychological effects on earthquake victims (Nakaya et al, 2024). Being in a temporary housing environment and the difficulty of rebuilding one's own life causes psychological distress (Tanji et al, 2024). Doğan states in his diary that he provides psychological support to the earthquake victims. Doğan is the one who writes the diary. The diary also shows a self-implemented therapy by the person providing psychological support. Earthquakes have severe psychological effects on both the victims and those who go for help.

Goelitz and Stewart-Khan say that those who aid survivors of a disaster witness traumas, and this can create psychological problems in them (2013: 43). That is another aspect of the psychological problem caused by the earthquake, which is supported by research findings, showing that women experience traumatic growth to a greater extent than men (Akbar and Witruk, 2016: 1040). This story deals with the psychological effects of the earthquake on individuals, especially with the focus on loneliness and loss of loved ones and the emotional state of those who went to help the earthquake victims.

### **3. Feelings of Guilt Caused by The Choices Made During The Earthquake**

*Sevgili Nefret / Dear Hate* is included in Hakan Şenocak's (Ankara-1961) storybook with the same title. The first publication date of the book is 2002. The place and time of the story are not specified. The story focuses on the psychological effects of the earthquake on a family. The fiction does not focus on the narrating of an event but on the individual's inner turmoil and confusion. The story analyses the internal tension the man experiences until the second he comes home in the evening and wakes up the following morning. The moment and aftermath of the earthquake, which created internal conflict, are told through flashbacks.

The story's protagonists are Handan and her husband Âli. The story begins with a statement indicating that Handan has neither forgiven Âli during the ten years of suffering nor blamed him (Şenocak, 2021: 11). The story's first sentence contains "not to forgive" and "not to blame". The meaning of these words becomes clear at the end of the story. The story consists of two main parts opposite to each other. The transition between the two parts is quite successful. The first part, which is longer, is devoted to the family's narration and the disaster. The second and shorter part focuses on the tension between the husband and wife, and the story ends up with an unexpected situation. The first part of the story begins by



saying that Âli is not the father of a child anymore after the earthquake ten years ago. The story describes Âli's profound love for Handan, his childlike protectiveness toward her, and Handan's psychological state as a grieving mother who lost her child in the earthquake. With her essential loss, Handan is depicted as resentful of life and Âli. With her essential loss, Handan becomes resentful of life and her husband.

The story presents a section of the tension between Âli and Handan on the tenth anniversary of the earthquake. The cause of the conflict is that when the disaster occurred, Âli had to choose between his son and his wife. Âli saved his wife first. However, before he could save his son, the house collapsed. According to Handan, her husband was selfish. He chose to save his wife instead of saving his son. Thus, the word "he did not forgive" in the opening sentence of the story gains meaning. After this tense conversation, Âli falls asleep, calculating the night of the earthquake and the last ten years. The next day, events in the story develop in a different direction. Handan was the one who lost her life in the earthquake. During the quake, Âli does a favour to his son. That explains the words "did not accuse" in the introduction.

In the story, one can also find some contradictions in Âli's consciousness. At the core of the contradiction is his decision to save his son, not his wife, during the earthquake and the unhappiness caused by this choice. Küçükay suggests that decision-making is a high-level cognitive process. It occurs when different mental and psychological functions work together (2018: 607). In the story, Âli questions his decision. As a result of the questioning, he first endeavours to verify his choice to save his son, suggesting the problem of confirmation bias besides the choice theory in the story. Confirmation bias is the tendency of people to seek information consistent with their hypotheses and avoid inconsistent information (Cowley & Byrne, 2005: 513). People take many actions throughout their lives. They do these actions as a result of various decisions they make. According to Glasser's choice theory, everything people do is their own choice. Being happy or unhappy is also a choice of people. Being happy or not is in one's own hands. People get information from other people. People decide what to do with that information (1999: 9). People have more control over their lives than they think. People often keep their pain under control (Glasser, 1999: 10). The situations people complain about are the result of their own choices. People should be aware of the fact that they can eliminate the circumstances they complain about (Glasser, 1999: 82). The story brings up the consequences of Âli's choice. A study has revealed that individuals want to verify and validate themselves before the thought turns into a decision and an action (Çitilci, 2012: 47). In the story, Âli tries to convince himself of the correctness of the decision. However, the story's subject is not the consequences of an individual's choice in an ordinary situation. The individual made his choice in the face of the deadly effects of the earthquake. Âli's choice is about the lives of his two favourite people. That story's plot is not unusual in Türkiye, where large and destructive earthquakes are commonplace.

#### **4. Fear of earthquake and mass media**

*Faylar Kırılmadan/Without Breaking Faults* was first published in 2003 in Ahmet Ümit's (Gaziantep-1960) book *The Devil is in the Detail* (Şeytan Ayrıntıda Gizlidir). It is a crime story that deals with the earthquake phenomenon within the detective genre. The story tells about a murder after the earthquake on 17 August 1999. The murder victim is a professor specialising in



seismology. The fiction focuses on the search for an answer to the question of who committed the murder and why. The most essential point that makes this story different from other earthquake-related stories is that it opens up a discussion. The reason behind the murder is the fear and uneasiness created in society by the scientist's prediction of a great earthquake in Istanbul. The story stands in a different place among earthquake-themed stories as it expresses the negative impact of the earthquake scientists' statements on society. The perpetrators of the murder say that they do not intend to kill but frighten the seismologist so that he will understand the negative feelings he creates in people who listen to his explanations (Ümit, 2003: 100).

In this story, Ahmet Ümit criticises the scientists, especially seismologists, who explain their views on earthquakes. Köknel argues that the fear of death caused by natural disasters and catastrophes is a harmful factor that increases the state of anxiety in the individual (1993: 180). Excessive increases in anxiety levels may lead to sleep disorders, headaches, high blood pressure, mental breakdown, suicide, and homicides (1993: 181). Sleep disorders, fear of the dark, nervousness, aggressive behaviour, outbursts of anger, separation anxiety, avoidance of school, and general changes in behaviour, mood, and personality may occur (Gluckman, 2024). In the story, the murder occurred without the intention to kill. However, those who committed the murder wanted the seismologist to experience the fear of earthquakes. Cüceloğlu argues that the reality of a person is the world he perceives (2020: 288). The story discusses the media's coverage of earthquakes. Timisi and Dursun researched the reflection of Gölcük Earthquake of 1999 on the media. This study suggests that earthquake news in the media needs to be analysed. On the one hand, the media spread information about the dimensions of the disaster beyond geographical borders. On the other hand, it created a world of meaning about the earthquake through the information it disseminated (2003: 95).

After the earthquake, the opinions of scientists reached the public through the media. The media shared lots of information about Türkiye's earthquake characteristics. Nevertheless, this information process created an environment of uncertainty and insecurity by creating its counterpart. The value of the scientist's scientific explanation has decreased (Timisi and Dursun, 2003: 93). Distrust can cause fear in a person. Sources argue that fear can develop in people in various ways, and conditioning is one of them (Morgan, 1988: 227). People's emotions affect their actions (Helmstetter, 2001: 49). Earthquake has the effect of creating fear in people who experience it directly or indirectly. Earthquakes cause loss of life and property and create fear in people. Naturally, people try to get rid of the pressure of this fear in various ways. The information about the earthquake in the visual and written media, especially the information that there is a high probability of a great earthquake, feeds fear in people. Fear can make people exhibit extraordinary behaviours. Ahmet Ümit has treated the fear caused by the earthquake in detective fiction. Thus, he has brought a different aspect of the earthquake and its effects to the agenda.

## 5. Earthquakes and altruism

İyilikseverler / *Benefactors*, by Barış Bıçakçı (Adana -1966), is included in the book entitled *We Will Come Again in The Spring* (Baharda Yine Geliriz). The book's first edition was published in 2006. This text, written as a situation story, does not specify the place and

time. Therefore, it cannot be said which earthquake the story describes and the situation afterward. That makes it possible to universalise the story and to make generalisations about all earthquakes. The story consists of a one-way telephone conversation. It consists of a person of unknown gender, age, and nationality describing the situation in the earthquake zone where s/he travelled to help. The conversation is about the aid provided in the earthquake zone. The benefactor is far from the narrative of the essential social and economic problems caused by the earthquake and human suffering. It involves observing the person making a phone call and reporting the conversation heard. At the end of the conversation, the benefactor says “Do you know that one never gets tired while doing good!” in the last part of the story. The narrative ends with the view that the earthquake region is not as it appears on television and that it is necessary to help (Bıçakçı, 2020: 89).

The story criticises the attitudes of people in the face of disasters. It is open to debate whether the people who did good deeds did it for the earthquake victims or themselves. Researchers argue that the strategies people develop to cope with the adversities they encounter may vary according to their skills, their belief that the situation is under their control, and their expectations about the outcome of their efforts (Türküm, 1999: 75). In the story, the fact that the person who went to the earthquake zone for help tells what s/he saw and the help and favours s/he gave to people brings to mind the data of positive psychology. The positive psychology movement started in 1998 and aims to improve the lives of individuals by focusing on the strengths and virtues of one’s character (Power et al, 2008: 346). Thus, it aims to establish the spiritual balance of the person. The aim of positive psychology is not only to repair the bad things in life but also to start creating positive qualities (Seligman and Csikszentmihalyi, 2000: 5). Positive psychology is a promising approach to improving well-being; it is treatment methods or activities that aim to develop positive emotions, behaviours or cognitions (Sin and Lyubomirsky, 2009: 468).

In the story of the *Benefactors*, the author emphasises the importance of doing good as a value in the foreground. However, in the background, the author criticises the person who does good and shares it with others on the phone. The criticism is that the person who does the favour expresses it openly and announces it to his/her surroundings. In other words, it is the altruistic attitude of such people. Theories about the evolutionary origins of altruistic behaviour have a long history, and the mechanisms that allow altruism to emerge and persist are still not fully understood (Hermsen, 2024). Altruism is a form of prosocial behaviour that aims to reduce the actor’s fitness while increasing the fitness of another individual as a recipient (Ando and Kawamoto, 2024). Durkheim argues that altruism is a voluntary act of self-destruction without self-interest (Dubeski, 2024). There are two perspectives on altruism, one positive and one negative. From the perspective of the positive approach, a favour is a work done gratuitously and is therefore valuable. The negative approach suggests that the person does this good deed to be appreciated by society and does not do the good deed gratuitously as it seems. Studies starting with Freud argue that egocentrism changes as the child grows up, the superego suppresses selfish desires over time, and altruism is accurate in childhood as a result of either the suppression of guilt or the internalisation of values (Monroe, 1996: 179, 180).

Social psychologists consider altruism together with the social and physical environment of the individual (Monroe, 1996: 180). The logical positivist theory put forward that individuals consider the cost and benefit of their behaviour and act accordingly (Güngör, 2019: 45). Logical positivists underline that the choices in their actions are a conclusion of the individual's egoism (Schlick, 1939: 66). The story "Benefactors" conveys a single person's one-sided telephone conversation. In this case, the story's title is singular, not plural. Thus, the title does not refer to one person but to everyone who exhibits similar feelings and behaviour. In fact, in this respect, there is a reference to the type of people who think more of themselves while doing favours to others. The intriguing aspect of the story is that it emphasizes the joy felt by the person who helped the earthquake victim. (Bıçakçı, 2020: 89). The statement that everyone should help is a response to the expectation of social appreciation. The story describes the behaviour of people who have not experienced the earthquake, lack empathy for earthquake victims, and are more interested in relieving their conscience.

### Conclusion

In conclusion, this study analysed five stories with different authors and genres. The five stories selected for this study exemplify the diversity of psychological events caused by the earthquake and the fact that natural disasters cause different problems in every person.

The main point of departure of these stories is the Gölcük Earthquake of 1999. All five stories are about the adverse psychological effects of the earthquake on people. However, in each of them, the experiences and mental states of people exposed to the earthquake are handled from very different perspectives. The story *How I Fell Out of Bed* deals with the lasting effect of the fear and anxiety caused by the earthquake on the individual. Even if there is no loss of life or property, people are aware of the possibility of a major disaster at any moment. That leads to a loss of trust and a sense of well-being and restlessness. *The Wrong Person* tells the story of a woman who lost her family in a traffic accident as a child and is devastated again by the death of her friends in the earthquake. It draws attention to the psychological effect of the loss of life on the earthquake victim. *Dear Hate* also focuses on the effects of the loss of life caused by the earthquake. It reminds us that a man may have to choose between the people he loves during earthquakes. It expresses the weight of the burden of conscience that human choices can create and the need to believe in the correctness of the choice. *Without Breaking Faults* tells what the feeling of fear and terror caused by an earthquake can make people do. The story *Benefactors* focuses on one of the attitudes and behaviours of people who go to help earthquake victims. It raises the question of whether the person who does good and helps is doing it for the earthquake victim or to feel good.

These stories draw attention to the psychological issues of earthquake victims besides their concrete problems, such as sheltering and nutrition. Material aid to earthquake victims is essential. These stories and similar narratives also emphasise the necessity of providing psychological support to earthquake victims. They show that the problems of earthquake victims are not one-sided. They contribute to understanding the duties of individuals and societies in the face of earthquake and earthquake victims. It creates awareness of this issue. They draw attention to the multifaceted destruction caused by the earthquake in Türkiye.

Buildings and roads can be rebuilt, and people can regain their material power. However, the dead people cannot be brought back. It takes a lot of time and effort for people and societies to recover their inner balance and mental well-being.

Five stories present the negative impact of earthquakes on an individual's mental health in the virtual reality of the fictional world. Nevertheless, in Türkiye, whose territory is surrounded by three large and active fault lines, literary texts are expected to focus more on the earthquake issue and raise awareness of different dimensions of the problem. It is thought-provoking that the literature of a country where thousands of people die in big earthquakes ignores earthquakes in literary productions. Earthquakes, as natural disasters, continue to create fear in people and cause many different problems accordingly. It threatens life to a great extent. While it is such an important issue, the reasons for ignoring earthquakes in literature should be open to discussion. Earthquakes are one of the most important problems in Türkiye with their social, economic, and psychological consequences. On the other hand, literary texts on earthquakes are quite few. Most of these texts describe the economic damages caused by the earthquake. Literary texts are reflections of the societies in which they are born. For this reason, psychology and sociology disciplines must investigate the reasons for the low number of earthquake-themed literary texts.

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## References

- Akbar, Z. & Witruk, E. (2016). Coping mediates the relationship between gender and posttraumatic growth. *Procedia - Social and Behavioral Sciences*, 217, 1036-1043.
- Arpat, E. & Şaroğlu, F. (1972). The east Anatolian fault system thought on its. *Bulletin of the Mineral Research and Exploration*. 78, 44-50.
- Bıçakçı, B. (2020). *Baharda yine geliriz* (12th ed.) İletişim.
- Bryman, A. (2008). *Sosial research methods* (4rd ed.) Oxford University Press.
- Burkovik, H. Y. (2004). *Sosyal fobi*. Timaş.
- Cowley, M. & Byrne, R. M. J. (2005). When falsification is the only path to truth. *Proceedings of the 27th Annual Conference of the Cognitive Science Society* (pp: 512-517) Erlbaum Mahwah.
- Creswell, J. W. (1998). *Qualitative inquiry and research desing: Choosing among five traditions*. Sage.
- Cüceloğlu, D. (2020). *Savaşçı* (65th ed.) Remzi.
- Çitilci, A. T. (2012). *Piyasa profesyonellerinin yatırım kararlarındaki davranış boyutu: Bir araştırma*. [Doctoral Thesis]. Marmara University, Banking and Insurance Institute, Department of Banking.

- Denis, P. (2007 [2006]). *Fobiler* (İ. Yerguz, Trans.) Dost.
- Duru, O. (2022). *Yeni ve sert yükümler*. Yapı Kredi.
- Erickson, F. (2011). A history of qualitative inquiry in social and educational research. Norman K. Denzin and Yvonna S. Lincoln (Eds.) *The Sage Handbook of Qualitative Research* (pp. 43-59) Sage.
- Friedman M. J. (2015). *Posttraumatic and acute stress disorders* (6th ed.) Springer.
- Glasser, W. (1999 [1998]). *Kişisel özgürlüğün psikolojisi* (M. İzmirli, Trans.) Hayat.
- Goelitz, A. & Stewart-Khan, A. (2013). *From trauma to healing: A social worker's guide to working with survivors*. Routledge.
- Güngör, E. (2019). *Altruism and rationality within the framework of behavioral economics*. [Master Thesis]. Department of Economics Anadolu University, Graduate School of Social Sciences.
- Helmstetter, S. (2001 [8th ed.]). *İçe dönük konuşmanın gücü* (H. B. Çelik, Trans.) Sistem.
- Hennenhofer, G. & Heil, K. D. (2001 [?]). *Korkuyu yenmek* (L. Yarbaş, Trans.) İlya.
- Hofmann, S. & DiBartolo, P. M. (2007 [1997]). Bilişsel terapi teknikleri. Walton T. Roth (Ed.; B. Büyükdere, Trans.) *Anksiyete terapisi* (pp. 89-116) Prestij.
- Işık, E. (2006). *Çocuk, ergen ve erişkinlerde anksiyete bozuklukları*. Erdal Işık, Yasemen Işık Taner (Eds.) Asimetrik Paralel.
- Johannesson, E., Simrén, M., Strid, H., Bajor, A. & Sadik, R. (2011). Physical activity improves symptoms in irritable bowel syndrome: A randomized controlled trial. *Am J Gastroenterol*, 106(5), 915-922.
- Kalyoncu, H. (2011). *Ölüm korkusu ve panik atak*. Boğaziçi.
- Kaya, N. (2007). *Sorularla panik atak*. Sistem.
- Ketin, İ. (1969). Kuzey Anadolu fayı hakkında. *Bulletin of the Mineral Research and Exploration*, 72, 1-27.
- Köknel, Ö. (1992). *Korkular takıntılar saplantılar* (2nd ed.) Altın Kitaplar.
- Köknel, Ö. (1993). *Zorlanan insan* (3rd Ed.) Altın Kitaplar.
- Küçükay, A. (2018). Karar vermenin psikolojisi. *TAAD*, (35), 607-640.
- Memiş Baytımur, N. (2012). *The structure and theme in the stories of Orhan Duru*. [Master Thesis]. The University of Fırat The Institute of Social Sciences The Department of Turkish Literature.
- Monroe, K. R. (1996). *The heart of altruism: Perceptions of common humanity*. Princeton University Press.
- Morgan, C. T. (1988 [1977]). *Psikolojiye giriş ders kitabı*. (H. Arıcı, I. Savaşır, et. al., Trans.) Hacettepe Üniversitesi.
- Nakajima, Ş. (2012). Deprem ve sonrası psikolojisi. *Okmeydanı Tıp Dergisi*, (28/2), 150-155.
- Nemutlu, Ö. F., Sarı, A. & Balun, B. (2023). Comparison of actual loss of life and structural damage in 06 February 2023 Kahramanmaraş earthquakes (Mw 7.7-Mw 7.6) with estimated values. *Afyon Kocatepe University Journal of Science and Engineering*. AKU J. Sci. Eng. 23 (2023) 055602, 1222-1234. <https://doi.org/10.35414/akufemubid.1302254>
- Ninan, P. T. & Dunlop, B. W. (2007 [2006]). *Anksiyete bozuklukları: Güncel tanı ve tedavisi-1*. Arif Nihat Dursun (Ed.) T. Ülker (Trans.) And.
- Özmen, B. (2000). 17 Ağustos 1999 İzmit Körfezi depreminin hasar durumu (rakamsal verilerle) *TDV/DR* (2000) 010-53. Türkiye Deprem Vakfı.
- Power, F. C., Nuzzi, R. C., Narvaez, D., Lapsley, D. K. & Hunt, T. C. (2008). *Moral education: A handbook*. Praeger.
- Schlick, M. (1939 [?]). *Problems of ethics* (D. Rynin, Trans.) Prentice-Hall.
- Seligman, M. E. P. & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *Journal of the American Psychological Association*. 55(1), 5-15.

- Sin, N. L. & Lyubomirsky, S. (2009). Enhancing well-being and alleviating depressive symptoms with positive psychology interventions: A practice-friendly meta-analysis. *Journal of Clinical Psychology*. 65(5), 467-487. <https://doi.org/10.1002/jclp.20593>
- Südaş, I. (2004). Effects of Marmara earthquake of August 17, 1999 on population and settlement: Case of Gölcük (KOCAELİ) *Aegean Geographical Journal*, 13, 73-91.
- Şaroğlu, F. & Güler, B. (2020). Recent deformation of the western Anatolia tectonic wedge: Block motions caused by escape to the west. *Geological Bulletin of Turkey*. 2020 (63) 161-194. <https://doi.org/10.25288/tjb.593423>
- Şenocak, H. (2021). *Sevgili nefret*. Dedalus.
- Tekay, M. (2002). *Annem gibi olmadım*. Epsilon.
- Timisi, N. & Dursun, Ç. (2003). *Medya ve deprem*. Radyo Televizyon Üst Kurulu.
- Türküm, S. (1999). *Stresle başa çıkma ve iyimserlik*. Anadolu Üniversitesi.
- Ümit, A. (2003). *Şeytan ayrıntıda gizlidir*. Doğan.
- Yüksel, K. (2013). *Fay boşluğu*. Alakarga.

### Electronic References

- Ando, J. & Kawamoto, T. (09.3.2024). Genetic and environmental structure of altruism characterized by recipients in relation to personality. *Medicina (Kaunas)*. Jun; 57(6): 593. (2021). Published online: 8 June 2021. <https://doi:10.3390/medicina57060593> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8228475/>
- Dubeski, N. (10.3.2024) Durkheim's altruism as the source of his social holism: A discussion of the viability of a social basis for moral principles, *Electronic Journal of Sociology*, 5(3). <https://sociology.org/ejs-archives/vol005.003/dubeski.html>
- Gluckman, P. (14.3.2012). *Psychosocial effects of earthquake*. <https://www.stuff.co.nz/the-press/opinion/perspective/6892800/Psychosocial-effects-of-the-earthquakes>.
- Hermesen, R. (09.3.2024). *Emergent multilevel selection in a simple spatial model of the evolution of altruism*. Published: 25 October 2022. <https://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1010612> <https://doi.org/10.1371/journal.pcbi.1010612>
- Nakaya, N., Nakamura, T., Tsuchiya, N., Narita, A., Tsuji, I., Hozawa, A. & Tomita, H. (26.02.2024). Prospect of future housing and risk of psychological distress at 1 year after an earthquake disaster. *Psychiatry and Clinical Neurosciences*, 70.4, (2016) 182-189. <https://onlinelibrary.wiley.com/doi/10.1111/pcn.12377>
- Presidency of The Republic of Turkey (2023). *2023 Kahramanmaraş and Hatay Earthquakes Report*. <https://www.sbb.gov.tr/wp-content/uploads/2023/03/2023-Kahramanmaraş-ve-Hatay-Depremleri-Raporu.pdf>
- Tanji, F., Tomata, Y., Sekiguchi, T. & Tsuji, I. (26.2.2024). Period of residence in prefabricated temporary housing and psychological distress after the Great East Japan Earthquake: a longitudinal study. *BMJ Open* 2018;8:e018211. doi:10.1136/bmjopen-2017-018211 <https://bmjopen.bmj.com/content/bmjopen/8/5/e018211.full.pdf>



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*Araştırma makalesi/Research article*

# An Analysis of Cultural Heritage News after the Kahramanmaraş Earthquakes in the Context of Framing Theory

Çerçeveleme Kuramı Bağlamında Kahramanmaraş Merkezli Depremler Sonrası Kültürel Miras Haberlerinin Analizi

**Erhan Arslan\***  
**Berna Arslan\*\***

*“Heritage is our legacy from the past,  
what we live with today,  
and what we pass on to future generations”*

*UNESCO*

*(<https://www.unesco.org/en/world-heritage>)*

## **Abstract**

In this study, we analyze the representation of cultural heritage in Turkish media following the devastating earthquakes on 6 February 2023, which struck Kahramanmaraş, Türkiye and impacted 11 provinces. This research focused on the portrayal of cultural heritage news within the context of framing theory,

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aiming to examine how historical artifacts and sites were discussed in the media post-earthquake. We employed content analysis to review 158 articles from three major newspapers (Cumhuriyet, Milliyet, and Yeni Şafak), selected for their diverse ownership and ideological perspectives. In the analysis, we explored various aspects such as the presentation style, framing techniques, use of visual materials, and the actors featured in the news. Findings highlight the frames used by the media, including responsibility, event impact, human interest, and economic perspectives, revealing differing narrative approaches based on the newspapers' editorial policies. The results underscore the media's role in shaping public awareness, the decline in coverage over time, and the lack of international engagement in preserving cultural heritage. The study offers insights into the media's social responsibility in highlighting the preservation and restoration of cultural assets, emphasizing the need for sustained sensitivity beyond disaster events.

**Keywords:** *cultural heritage, earthquake, news analysis, framing theory*

## Öz

Bu çalışmada, 6 Şubat 2023 tarihinde 11 ili etkileyen Kahramanmaraş merkezli depremlerin ardından, kültürel miras haberlerinin medyada nasıl temsil edildiğini inceledik. Bu araştırmada çerçeveleme teorisi bağlamında kültürel mirasın medyadaki yansımalarını ele alarak, tarihi eserler ve sit alanlarının deprem sonrası medyada nasıl ele alındığını analiz etmeyi amaçladık. Bu nedenle, farklı sahiplik yapılarına ve ideolojik bakış açılarına sahip olmaları nedeniyle seçilen üç farklı gazeteden (Cumhuriyet, Milliyet ve Yeni Şafak) toplam 158 haberi içerik analizi yöntemiyle inceledik. Analizde, haberlerin sunum biçimi, çerçeveleme teknikleri, görsel materyallerin kullanımı ve haberlerde yer alan aktörler gibi çeşitli unsurları ele aldık. Bulgular, medyada sorumluluk, olay etkisi, insani ilgi ve ekonomik perspektifler gibi farklı çerçevelerin kullanıldığını ortaya koymuş ve gazetelerin editoryal politikalarına bağlı olarak değişen anlatım yaklaşımlarını göstermiştir. Sonuçlar, medyanın kamuoyu farkındalığını şekillendirmedeki rolünü, zamanla azalan medya ilgisini ve kültürel mirasın korunması konusunda uluslararası angajmanın yetersizliğini vurgulamaktadır. Çalışma, kültürel varlıkların korunması ve restorasyonu konusunda medyanın sosyal sorumluluğuna dair önemli çıkarımlar sunmakta ve afet olaylarının ötesinde sürdürülebilir bir duyarlılığın gerekliliğini vurgulamaktadır.

**Anahtar sözcükler:** *kültürel miras, deprem, haber analizi, çerçeveleme kuramı*

## Introduction

Cultural heritage consists of tangible and intangible assets which tell us who we are and teach us about our past. They establish and deepen the bond between us and all other societies with whom we have collectively written the history of humanity. As unique treasures preserving all our experiences throughout history, they shape our memory and carry it into the future. Due to their significance, this subject has been addressed internationally and several efforts have been put to use to protect them. Our country, rich in unique treasures, has been home to countless civilizations from the earliest periods of history to the present. As a result, Anatolia is often regarded as the cradle of these diverse cultures. As stated by Engin (2023) this land of ancient civilizations and a rich cultural heritage, but it is located at the intersection of three tectonic plates and has been prone to strong and influential earthquakes throughout history.

The United Nations Educational, Scientific and Cultural Organization (UNESCO) seeks to encourage the identification, protection, and preservation of cultural and natural heritage around the world, which is considered to be of outstanding value to humanity. This is underlined in an international treaty called the Convention concerning the Protection of the World Cultural and Natural Heritage, adopted by UNESCO in 1972, making the concept of World Heritage exceptional as a universal application because the World Heritage sites belong to all the peoples of the world, irrespective of the territory on which they are located.

As of 2023, there are a total of 1,199 World Heritage Sites, which belong to 195 Member States within UNESCO. Of these, 933 are cultural, 227 are natural, and 39 are mixed properties. Türkiye has 21 heritage sites on this list, 19 of which are cultural and two are mixed (UNESCO, 2024). In addition, Türkiye has a total of 79 sites on the Temporary List, updated in 2023, comprising 72 cultural, four mixed, and three natural sites (UNESCO Türkiye National Commission, 2024).

Natural and man-made disasters, including earthquakes, landslides, floods, heat waves, and fires, can severely impact cultural heritage. They can seriously damage or even completely destroy monuments, historical and archaeological sites or cultural landscapes. In addition to the endangerment of people who visit those places and people who live by these sites, the degradation of heritage has a negative socioeconomic impact on local communities and involves a loss of identity-generating values and of cultural diversity (EUR-OPA, 2024). The devastating impact of natural disasters is most evident in residential areas, leading to significant material and emotional losses. Beyond the loss of human life, one of the most irreplaceable losses is cultural heritage (Ünal, 2014).

This study aims to examine how the media portrays historical artifacts damaged by earthquakes and seeks to assess the extent of public awareness generated by media coverage in the aftermath of such events. Following the earthquake-widely referred to as the “disaster of the century”-we analyze Turkish media coverage related to cultural heritage. Using content analysis within the framework of framing theory, we aim to highlight the media’s role and social responsibility in addressing this critical issue. News in the media, along with the information provided about events and phenomena, affects how individuals and societies form their awareness. Therefore, it is important to understand the frames used to present

“cultural heritage” in earthquake news, the perspectives from which the media discusses the issue, and how social perception is constructed in this context.

### 1. Cultural heritage

Global cultural and natural values, transmitted from generation to generation throughout the historical process, are known as heritage. Heritage encompasses the values passed from the past to the future related to the regions and identities of societies. The concept of cultural heritage and the necessity of its preservation have been approached from different dimensions and expanded over time. All value systems that exist worldwide, embody cultural diversity, and trace the footprints of the past are discussed based on fundamental human rights and with an emphasis on equality.

In this context, the first document highlighting *the right of everyone to participate in cultural life, and the importance of culture and cultural participation for society* (Çalış, 2010: 6) is the Article 27 of the Universal Declaration of Human Rights (UDHR), which is a milestone document in the history of human rights. Drafted by representatives with different legal and cultural backgrounds from all regions of the world, the Declaration was proclaimed by the United Nations General Assembly in Paris on 10 December 1948 as a common standard of achievements for all peoples and all nations. Article 27 specifically states: “1. Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits. 2. Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author” (www.un.org). Accordingly, the right to freely participate in cultural life is explicitly recognized; however, what participation in cultural life means and what freedom entails are not explained. The concretization of the content of this right and the identification of cultural heritage rights have been made possible through the recommendations and commentaries issued by the Committee on Economic, Social and Cultural Rights and the United Nations Human Rights Council. Article 15 of the International Covenant on Economic, Social and Cultural Rights, adopted within the UN in 1966, also regulates the right to participate in cultural life and explicitly guarantees this issue as a human right (Türkbay, 2021: 1453).

Preserving cultural and natural heritage originated in common values and increasing public awareness about this heritage enables improved mutual understanding among different communities. Therefore, there are significant international organizations and treaties to protect cultural assets and heritage globally, based on shared principles. The destruction experienced in Europe following World War II brought about new needs in the field of preservation. The agenda of the Second International Congress of Architects and Technicians of Historic Monuments, held in Venice in 1964, was determined in line with these issues. The Venice Charter, which has been implemented for nearly half a century and is a fundamental international document concerning the preservation and restoration of cultural properties, was formulated at this congress. The resolutions intended to protect cultural heritage contained in this document, later implemented worldwide under the leadership of UNESCO, which is one of the leading organizations aiming to protect cultural heritage were established (Emekli, 2005: 102; ÇEKÜL Foundation, 2010).

The Universal Declaration of Human Rights has played a triggering role in UNESCO's cultural activities and it showed its influence in early 1960s. Initially, in UNESCO's history, cultural development was considered in connection with tangible heritage (Çalış, 2010). The "Convention Concerning the Protection of the World Cultural and Natural Heritage" signed at UNESCO's General Headquarters in Paris, 1972, emphasized that the protection of unique and irreplaceable cultural properties, regardless of which nation they belong to, is important for all the peoples of the world. The convention came into force in 1975.

At UNESCO's 17th General Conference, during the adoption of the "Convention Concerning the Protection of the World Cultural and Natural Heritage", many member countries emphasized the importance of protecting intangible cultural heritage. They proposed that a similar convention should be created for intangible cultural heritage, highlighting the need to protect not only tangible but also intangible heritage. Consequently, at UNESCO's 32nd General Conference in 2003, the "Convention for the Safeguarding of the Intangible Cultural Heritage" was adopted (Oğuz, 2007).

Türkiye became a party to UNESCO's "Convention Concerning the Protection of the World Cultural and Natural Heritage" in 1983 and to the "Convention for the Safeguarding of the Intangible Cultural Heritage" in 2006. In the 2000s, there have been fundamental institutional changes, and academics, intellectuals, non-governmental organizations, and local governments have started to play a more active role in the struggle for preservation (ÇEKÜL, 2010).

Despite the measures and legal regulations taken worldwide and in our country for the protection of cultural heritage, these treasures have suffered damage and destruction due to human activities or natural disasters. Earthquakes are among the most significant of these natural disasters.

Today, cultural heritage is no longer defined solely as structures with historical significance but as a combination of all cultural values associated with humanity, encompassing both tangible and intangible values. In the context of tangible values, cultural heritage refers to movable and immovable assets such as monuments, historical buildings, artworks, and books. UNESCO defined intangible heritage in the Convention Concerning the Safeguarding of the Intangible Cultural Heritage in 2003:

The 'intangible cultural heritage', as defined is manifested inter alia with these domains: oral traditions and expressions, including language as a vehicle of the intangible cultural heritage; performing arts; social practices, rituals and festive events; knowledge and practices concerning nature and the universe; and traditional craftsmanship. (Jokilehto, 2005: 43)

Cultural heritage is "*a treasure that tells the members of a society about their common past, strengthening their sense of solidarity and unity*". Cultural heritage, which establishes the connection between the past and the present, also serves as a reference point for building the future and spiritually enriches people's lives (Ünal, 2014). Cultural heritage connects people to their past and serves as unique sources of information about the development of humanity.

## 2. Effects of natural disasters on cultural heritage and the 6 February 2023 earthquake

Disasters are defined as the consequences of natural, technological, and human-induced events that cause physical, social, and economic losses for people, affect communities by disrupting or halting normal life and human activities, and cannot be managed using the affected community's local resources and capabilities (Kadioğlu, 2014: 10). The destructive effects of natural disasters are especially evident in residential areas, causing significant material and immaterial losses. Among these losses, after human life, the most irreplaceable value is cultural heritage (Ünal, 2014: 8).

Heritage is vulnerable to damage from both natural disasters-such as earthquakes, fires, and floods-and human-induced disasters, including wars, conflicts, and invasions. Among these, earthquakes are particularly devastating for archaeological heritage sites located on or near fault lines (Uzunel, 2023: 63).

The tangible and intangible values that constitute cultural heritage, which form the collective memory of humanity, include monuments, examples of civil architecture, rituals performed in these structures and areas, and intangible values such as special traditional productions that create the spirit of a place. These elements add depth and richness to our lives and serve as common points of reference for societies in shaping the future (Ünal, 2014: 8). Heritage is evidence of the identity, diversity, and social and cultural life of the places where they are located, having been formed over thousands or hundreds of years. Throughout this long historical process, they have been exposed to numerous disasters (Uzunel, 2023: 61).

However, the loss or deterioration of cultural heritage due to natural disasters adversely affects not only the society to which it belongs but also other societies by impacting their identities, cultures, historical knowledge, and socio-economic values (Bozkurt, 2023: 125). In recent years, severe natural events have increasingly turned into disasters, with their frequency rising, as these events threaten significant architectural and natural heritage sites worldwide (Ünal, 2014:17).

Anatolia, known as ancient lands rich in cultural heritage, has been home to numerous civilizations from the dawn of humanity to the present day. This geography, which has been home to many important cultures and civilizations in human history, is also a region where destructive earthquakes occur. The Dead Sea Fault, starting from the Sinai Peninsula in the south and extending to Kahramanmaraş, along with the East Anatolian and North Anatolian faults, are the most significant evidence that we live in a seismologically active region (Engin, 2023).

Due to Türkiye's geographical structure, many earthquakes have occurred from past to present. Our country has experienced a significant loss of life due to earthquakes. In addition, all components of social life, primarily health, education, the economy, and the cultural structure, have suffered severe damage. One of these threats is the potential loss of cultural heritage.

In early 2023, two devastating earthquakes with magnitudes of Mw 7.7 and Mw 7.6 which was described as the disaster of the century, hit Pazarcık and Elbistan in Kahramanmaraş, causing tremendous loss of life and severe damage across multiple cities including Kahramanmaraş,

Hatay, Adıyaman, Gaziantep, Malatya, Kilis, Diyarbakır, Adana, Osmaniye, Şanlıurfa, and Elazığ. The earthquakes caused widespread destruction in both urban and rural areas, impacting this culturally and historically significant region (ODTÜ TAÇDAM, 2023).

Immediately after the disaster, the primary focus must be obviously on saving lives through search and rescue operations. In addition to the profound grief and trauma caused by the loss of lives, the damage to cultural assets, accumulated over centuries in this historically rich region, has deeply affected societal morale (Güler, 2023: 22). Major earthquakes like these lead to extensive human and economic losses, with profound and lasting impacts on society (Shinki et al., 2023). The region, inhabited since ancient times, hosts UNESCO World Heritage sites such as Göbeklitepe, Arslantepe, Mount Nemrut, Diyarbakır Fortress, and Hevsel Gardens Cultural Landscape. Other sites like Anavarza, Harran, Karatepe Aslantaş, Hatay St. Pierre Church, Yesemek Quarry and Sculpture Workshop, Vespasianus Titus Tunnel, and Zerzevan Castle are on the Tentative List (Güler, 2023:22). The monumental structures and examples of civil architecture in the earthquake-affected provinces suffered varying degrees of damage; some were partially, others completely destroyed. There were significant losses in urban and rural textures and cultural landscape components (Uzun, Somuncu, 2023: 11).

Disasters, especially those causing significant material and emotional damage, remain in the public eye for an extended period thanks to mass media (Aslantaş, 2023: 783). It is entirely natural for media coverage to initially focus on the loss of lives following a disaster. Subsequently, attention shifts to material losses (such as collapsed buildings), the needs of the people living in the affected region, the aid provided to the area, and developments in search and rescue operations. Additionally, the extent to which cultural heritage has been affected by the disaster also becomes a topic of media interest. This study specifically examines the content of media reports on cultural heritage during this period, questioning the dimensions in which the issue is addressed by the media.

### **3. The role of media in the preservation of cultural heritage**

The transmission of all material and intangible values that constitute a society's identity, culture, and history to future generations is crucial for maintaining and perpetuating societal identity. Muşkara (2017) emphasizes that this transmission significantly contributes to the social cohesion and integrity of the community.

Mass media are among the most critical tools for directing and persuading society through the news and content they publish. With the advancement of technology and the resulting changes in communication environments and opportunities, people now shape their lives and lifestyles through media messages. In this context, as with any topic, media content plays a significant role in informing and raising awareness within society about cultural heritage.

The media publications regarding the nature, value, meaning, and importance of cultural heritage, information on the damage cultural heritage sites suffer after disasters, and the restoration efforts contribute to understanding and preserving cultural heritage. These



publications help raise awareness about cultural heritage within society. Cereci (2019: 13) also highlights that efforts to protect cultural heritage through the press and media are observed in almost all countries that value cultural heritage.

Recent developments in disaster management and the work of international organizations emphasize the importance of a community-based disaster management approach. The media, as a critical source used in community education, provides significant advantages in reaching the target audience with the resources it has (Kadioğlu, 2014: 29). Considering the media's educational and informative functions, the discourse it produces regarding risks, the agenda it creates, and the awareness it generates have a significant impact. Given Türkiye's geographical location and physical history, risk communication activities related to earthquakes, a risk factor that always remains relevant, carried out through the media, are critically important (Vural et al., 2022). Providing information about cultural heritage damaged after disasters, emphasizing the value, preservation, and restoration stages of these historical and monumental structures, will increase public awareness of these values. These values are indicators of historical and cultural unity that bind people together.

These historical and monumental structures are carriers of tangible cultural heritage. Pierre Nora refers to this as "sites of memory".

Among these sites of memory, museums, archives, cemeteries, collections, festivals, anniversaries, treaties, sacred places, monuments, and commemorative ceremonies, speeches of praise, and dictionaries. These sites of memory enable societies to differentiate themselves from other societies and carry a sense of belonging to the group. If memories were not preserved in memory, history would have long erased them. But if the preserved things were not in danger, there would be no need for them to be constructed. (Nora, 2006: 9-23, cited in Zelan, 2022: 20)

These memory sites, which play a leading role in the formation of cultural and collective memory, link the past to the future through the information and forms of representation conveyed by the media.

Collective memory is also an essential building block for nation-building and national identity. It creates a bond that generates an image of temporal continuity between generations and legitimizes the existing socio-political order (Gross, 2002: 342). According to Başaran İnce (2010), the mediated nature of media-produced knowledge, its undeniable importance in shaping past and future knowledge, and its role as one of the primary sources used to meet current needs all contribute to the significance of the media in memory construction (Başaran İnce, 2010: 17).

At this point, the factors that shape the forms of representation in the media become important, as it plays a central role as a primary agent in the reconstruction of culture. The information produced in the media is retold based on numerous factors, such as the media's ownership structure, its ties to economic and political circles due to its commercial nature, its general editorial policy on an ideological level, journalists' perspectives on events and phenomena, their adherence to professional ethical principles, their awareness of social responsibility, the characteristics of the target audience, their relationships with news sources, and the level of use of the technology and opportunities it provides.

#### 4. The purpose of the study

This study aims to reveal the ways in which the impact of the earthquakes on cultural heritage is presented to the public in the news, and to determine the level of media awareness and information dissemination to the public following an earthquake within the framework of framing theory. The specific aim of the study is to examine how the Turkish media handled the issue of cultural heritage, which forms the unity of history, culture, and identity following the 6 February 2023 earthquake in Türkiye, to question its integrative effect, and to discuss the social responsibility of the media in this regard.

In accordance with the purpose of the research we examine the frames of news articles covering cultural heritage, including their hierarchical positioning, presentation styles, editing methods, use of visual elements, sources of information, the actors mentioned in the news, quality and features of the content, and communication direction.

#### 5. Methodology

In this study, we used qualitative and quantitative analysis methods with regard to framing theory. First, following the 6 February 2023 Kahramanmaraş earthquakes, we performed content analysis on the newspaper articles published between 7 February 2023, and 7 April 2023, on the internet portals of Cumhuriyet, Milliyet, and Yeni Şafak newspapers, which have different ownership and ideological structures within the Turkish press sample; Cumhuriyet represents a national left-wing perspective, Milliyet represents a liberal-right stance and Yeni Şafak represents an Islamist-conservative viewpoint. We have foreseen that these newspapers, which have different editorial strategies and appeal to different readership groups within society, will also diverge in their representations of cultural heritage.

The news articles on these internet pages were queried using the keywords “historical artifact,” “cultural heritage”, and “memory”, resulting in a total of 1250 articles from these newspapers. The selected period covers the densest publication of news on the scope of this study. We excluded news not directly related to the research topic. For example, if a news article contained the word “memory” but its content was not relevant to the research scope, it was not included in the analysis.

Ultimately, we examined 158 news directly related to the research topic using a content analysis coding form. We queried Cultural heritage news based on their topics, presentation styles, arrangement methods, use of visual materials supporting the news, news sources in terms of production, actors featured in the news, and the quality of the news employing the content analysis method. We interpreted the data after we collected them. Content analysis, particularly in communication studies, was first defined and used by Bernard Berelson, who described it as a ‘research technique for the objective, systematic and quantitative description of the manifest content of communication’ (Berelson, 1952: 18, as cited in Macnamara, 2018). Fiske emphasized that content analysis is used to provide an objective, measurable, and verifiable explanation of the manifest content of messages (Fiske, 1996: 176).

Media content analysis draws on the rich heritage of content analysis within both the quantitative and qualitative traditions of this research method. Given the important role of media in societies as sources of information and influence, as well as reflections of spokespersons' and public opinions, media content analysis provides a non-intrusive method for identifying views, concerns, and discourses (Macnamara, 2018). This technique is frequently used and considered a reliable method for determining and analyzing the nature of social reality in communication studies.

In the study, we also examined which frames were used to present the relevant news to the readers. Erving Goffman is widely regarded as the creator of framing analysis, particularly with his book *Frame Analysis*, which has become the foundation of contemporary framing theory. Goffman (1974) states that frames influence people on how to understand and create meaning about a specific issue or event. In the field of mass communication and journalism, the concept of framing is an important consideration. Particularly, in journalism, the theory of framing has strong roots in the principles of the theory of mediation. This theory states that 'media' have the role of a mediator between man and society, between the outside world and the audience. In this sense, it is important to clarify that the role of mediators between reality and individuals is not reduced to a simple transmission of messages, but it is important to consider that media messages are created when making news (Gavilán, 2011: 50-52).

By its nature, the concept of framing finds a place in almost every field of social sciences, but it draws particular attention in communication sciences for how it is applied to news texts (Erdem, 2022: 47). The restructuring and reconstruction of news in the media can be explained through the concepts of framing and highlighting. A news frame is the general context created to make the news meaningful, determining what is included in the news and what is excluded (Atabek & Uztuğ, 1998: 104). Frames in news can affect how topics and events are learned, interpreted, and evaluated (Erdoğan, 2014: 36). The information provided in the media about events and phenomena influences the consciousness of individuals and societies in this context. Therefore, the frames in which news is handled and the perspectives from which the media discusses the topic also shape public perception.

According to Entman (1993: 52) framing essentially involves selection and salience. To frame is to select some aspects of a perceived reality and make them more salient in a communicating text, in such a way as to promote a particular problem definition, causal interpretation, moral evaluation, and/or treatment recommendation for the item described. Frames, then, define problems-determine what a causal agent is doing with what costs and benefits, usually measured in terms of common cultural values; diagnose causes-identify the forces creating the problem; make moral judgments-evaluate causal agents and their effects; and suggest remedies-offer and justify treatments for the problems and predict their likely effects. A single sentence may perform more than one of these four framing functions, although many sentences in a text may perform none of them. And a frame in any particular text may not necessarily include all four functions. Framing is an

indispensable narrative device for news media because even the same facts may lead to conflicting understandings if deliberate framing is employed. Therefore, identifying media framing is a crucial step to understanding how news media influence the public (Kwak, An & Yeol Ahn, 2020: 305).

The major task of determining textual meaning should be to identify and describe frames; content analysis informed by a theory of framing would avoid treating all negative or positive terms or utterances as equally salient and influential (Entman, 1993: 57). Based on Entman's findings, this study supports content analysis with framing. The news published after the earthquake was framed during the coding process. According to the nature of the news, the identified frames include explanation, claim, criticism, expectation, solution proposal, support, information, and routine.

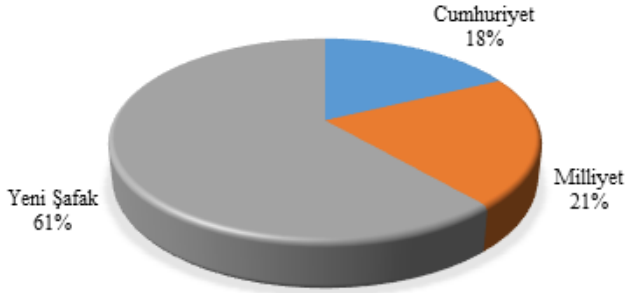
For the presentation of cultural heritage in news headlines, the "Responsibility Frames, Event Impact Frames, Human Interest Frames, and Economic Frames" were determined based on Entman (1993). Each frame was further examined with unique sub-themes according to the content of the news. In the Responsibility Frames for the presentation of cultural heritage/historical artifacts in news headlines, the sub-themes identified were predictions about the future of cultural heritage, warnings and solution proposals from scientists. In the context of Event Impact Frames, the sub-theme identified was damage to cultural heritage. In the context of Human Interest Frames, the sub-themes were preservation and sustainability of cultural heritage and urban belonging, ownership, and urban attachment. In the Economic Frames, the sub-themes identified based on the news content were supported by the President and Government representatives, Turkish Non-Governmental Organizations (NGO) and international organizations.

In addition to the previously mentioned frames, the tone of the news was also coded as positive, negative, or neutral. According to Boydston (2013), tone is classified into three categories: positive, negative, and neutral. The tone of a certain issue or topic is positive if the construction about the issue is positive. It is negative if the construction is negative and neutral if it is ambiguous (Boydston et al., 2013). We interpreted all data related to content analysis and framing of the topic by creating tables and graphs.

## **6. Findings and comments**

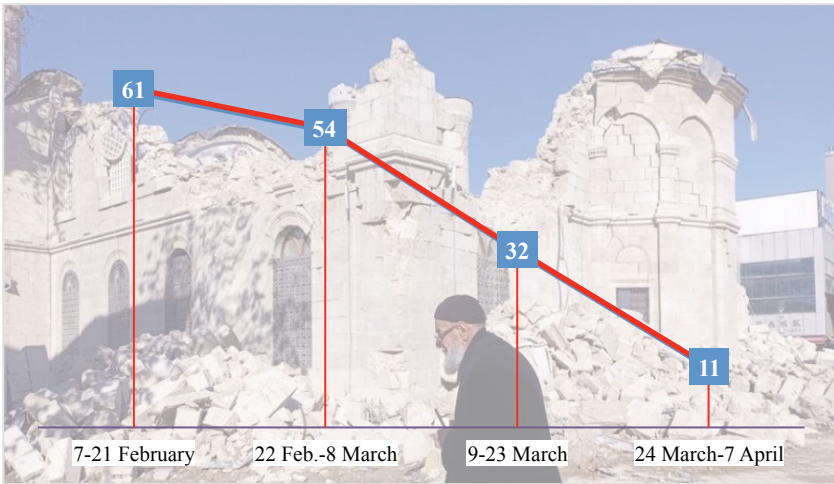
We queried the keywords "historical artifact," "cultural heritage," and "memory", within time limit set from 7 February 2023 to 7 April 7 2023 (these keywords will be collectively referred to as cultural heritage) on the internet pages of the newspapers. We harvested 1250 news articles that form the sample of the study. Of these, 158 news directly related to the research topic were analyzed using the content analysis coding form. We interpreted the findings obtained from the analysis within the framework of framing theory, accompanied by graphs, tables, and photographs.

**Figure 1:** Distribution of News by Newspapers



When examining the distribution of the total 158 articles published on the newspapers' internet pages, we observe that the highest number of articles related to the research topic appeared in Yeni Şafak newspaper (97 articles), while the lowest number of articles appeared in Cumhuriyet newspaper (28 articles).

**Figure 2:** Temporal Distribution of News



In the temporal distribution of the articles published in the newspapers, it is particularly noticeable that the number of articles addressing “cultural heritage” topics was higher during the first week after the earthquake. By the week of March 24 – April 7, 2023, the number of articles decreased to 11. This situation is actually connected to the concept of news value. In the context of temporal proximity, news about the event tends to be more quantitatively dense in the initial weeks, while the number of articles decreases in the subsequent periods.

**Table 1:** Pages Containing the News

Page Name	Number of Articles	Percentage
Agenda	104	65,8
Culture-Art	10	6,3
Economy	5	3,2
Life	26	16,5
Authors	8	5,1
Special Cases	4	2,5
World	1	0,6
<b>Total</b>	<b>158</b>	<b>100,0</b>

When examining on which webpages the articles were presented to the readership on the newspapers' websites, it is noteworthy that the majority of the articles (104 articles) were published on the "Gündem-Son Dakika" (Current Affairs - Breaking News) page. Articles published on the "Yaşam-Hayat" (Life) page accounted for 16.5% of the total, making it the second most common page for these articles. It was observed that topics related to cultural heritage in the context of "urban belonging" and "urban attachment" were predominantly featured on these pages. The number of articles published on the culture and arts pages of the newspapers was the third highest.

**Table 2:** Presentation Style of the News

Presentation Style	Number	Percentage
News	119	75,4
Columns	10	6,3
Interview	4	2,5
News-Interview	9	5,7
Research-Analysis	7	4,4
Photo Gallery	7	4,4
Video News	2	1,3
<b>Total</b>	<b>158</b>	<b>100,0</b>

A significant portion, 75.4%, of newspaper content related to "cultural heritage" is presented to readers in the format of news articles. As seen in Table 2, opinion columns (6.3%) and news-interviews (5.7%) are also notable presentation formats. It is noteworthy that the "research-analysis" presentation format, which allows for a comprehensive examination of the topic, is limited to only 7 articles. Although it is possible to produce multi-dimensional research-analysis articles that include cultural accumulation, past civilizations, and future projections, this presentation format remains quite restricted.

Another point to highlight is the minimal number of "video news" presentations, with only 2 articles utilizing this format. Despite the advancements in technology and the frequent use of video news on news websites, this format is underutilized in this context. Video



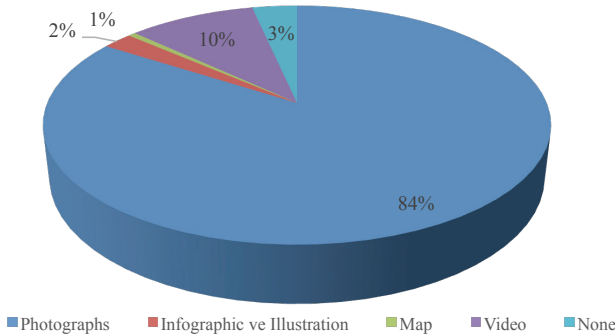
journalism, which gained popularity after the 1990s, is particularly important for conveying the atmosphere of an event to the target audience with full intensity.

**Table 3:** Arrangement of News

Arrangement Style	Number	Percentage
Investigative News	4	2,5
Compilation News	1	0,6
Thematic News	13	8,2
Information News	63	39,9
Case News	60	38,0
Narrative News	8	5,1
Comment	9	5,7
<b>Total</b>	<b>158</b>	<b>100,0</b>

When examining the distribution of cultural heritage news according to their arrangement styles on the pages, it is found that the “informative news” category, created using expert opinions or written sources on science/technology, appears most frequently (39.9%). This indicates a positive aspect in terms of educating the readership about the topic. The number of “event news,” which is driven by breaking developments, totals 60 articles (38.0%). “Topical news,” which focuses on a specific topic and is composed of similar content, accounts for 8.2% of the articles. Opinion columns, categorized as “commentary,” make up 9.0% of the news. The “story news” arrangement style, where events are narrated to the readers, constitutes 5.1% of the articles. It is noted that story news is generally published in the context of urban belonging and urban attachment “Investigative news,” which involves special work by a reporter to report on a situation, appears only 4 times in the sample newspapers. Lastly, “compilation news,” which combines elements of the topic from different historical processes using primary and secondary sources, was featured only once.

**Figure 3:** Distribution of Visual Materials Supporting the News

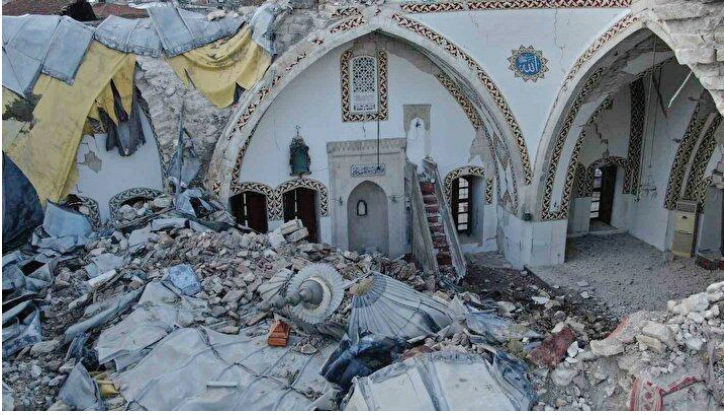


Note: Multiple selections made on this question

When examining the distribution of visual materials supporting the news, it is noted that some articles use more than one type of visual material. As seen in Figure 3, the use of

“photographs” ranks first in the visual material category with a rate of 84.0% (148 articles). The photographs generally highlight the damage to the historical heritage.

In Photo 1, the Habib-i Neccar Mosque, which was built in Antakya in 638 when it was captured by Muslim Arabs, is featured. It is considered to be the first mosque built within the current borders of Türkiye. After being completely destroyed in the 6 February earthquakes, reconstruction work has begun under the supervision of the General Directorate of Foundations to restore the Habib-i Neccar Mosque to its original form.



**Photo 1:** Hatay-Habibi Neccar Mosque (İhlas News Agency)

In the photographs, people experiencing profound traumas are often depicted alongside historical heritage, creating a powerful narrative within the news content. In Photo 2, for instance, the historic Hacı Yusuf Mosque in Malatya, which was supported by Sultan Abdulhamid II, is among the places damaged by the earthquake. The photograph, capturing both the damaged historical artifact and an elderly earthquake survivor in the same frame, conveys deep meanings.



**Photo 2:** The historic Hacı Yusuf Mosque in Malatya (Anadolu Agency)

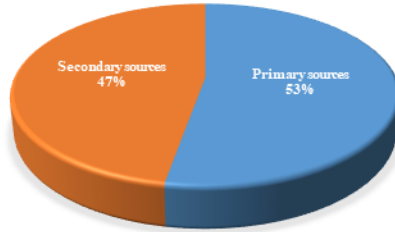
One can notice that the “before-and-after” theme is emphasized in the photographs featured in the news. In Photo 3, the structure known among the public as Şih Mosque was built by Sheikh Hüseyin Dede. It is estimated that the mosque was constructed before 1681. The minaret of the mosque, where a cannonball fired by the French during the National Struggle period became embedded, was completely destroyed in the earthquakes described as the “disaster of the century.” This mosque is one of the rare ones that was entirely demolished in the earthquake.



**Photo 3:** Kahramanmaraş- Historical Şih Mosque Before/After (Yeni Şafak)

Videos were used in a total of 17 news articles. It is noteworthy that these videos generally originated from news agencies. “Infographics and illustrations,” which make the news more understandable, were presented to readers in 4 articles, while ‘maps’ emphasizing the concept of the event’s location were featured only once. Additionally, six articles did not include any visual materials.

**Figure 4:** Distribution of News by Sources in Terms of Production



Note: Multiple selections made on this question

The distribution of sources in cultural heritage news shows that ‘primary sources’ which involve the reporter being on-site and interviewing news sources, constitute 53.0% of the articles. The use of secondary sources, which include press releases, documents, reports, and other media content from news agencies, accounts for 47.0%. In the use of secondary sources in cultural heritage news, it is particularly noteworthy that agency news, documents related to the management of the post-disaster process, and reports on future disaster preparedness and risk planning are frequently utilized.

**Table 4:** Distribution of Domestic/International News Sources in Terms of Structure

News Sources	Number	Percentage
Domestic Official Sources	43	24,9
International Official Sources	1	0,5
Domestic Private Sources	43	24,9
International Private Sources	0	0
Domestic News Agencies	68	39,3
International News Agencies	0	0
Not Available	18	10,4
<b>Total</b>	<b>173</b>	<b>100,0</b>

Note: Multiple selections made on this question

In the creation of cultural heritage news, some articles utilize multiple internal and external news sources. The most frequently used sources are “internal news agencies”, which account for 39.3% of the articles. As shown in Table 4, “internal official sources”, which include official sources like the President, government officials, and public servants, and “internal private sources”, which consist of private sector members, NGO representatives, and experts, equally contribute to 24.9% of the news. A notable point highlighted in the results is that “external official sources” were cited in only one article, while “external private sources” and “external news agencies” were not cited in any articles.

**Table 5:** Distribution of Actors Featured in the News

Actors	Number	Percentage
The President of Turkish Republic	6	2,7
Turkish Government Authorities	25	11,2
Ministry of Culture and Tourism	36	16,0
Opposition Party Representatives	4	1,8
Foreign Country Official	1	0,4
Turkish Scientist	38	16,9
Foreigner Scientist	2	0,8
Local Governments	9	4,0
Union of Chambers of Turkish Engineers and Architects	5	2,2
Turkish NGO	16	7,1
Foreign NGO	2	0,8
UNESCO	8	3,6
Religious Official	9	4,0
Citizen	52	23,2
Other	12	5,3
<b>Total</b>	<b>225</b>	<b>100,0</b>

Note: Multiple selections made on this question

An analysis of the distribution of actors “citizens” (52 articles), “Turkish scientists” (38 articles), and the “Ministry of Culture and Tourism” (36 articles) occupy the top three positions. The frequent appearance of earthquake-affected citizens as the most common actors in the news reflects a strong connection between cultural heritage and urban belonging, ownership, and life. A notable point in Table 5 is the low visibility of foreign actors in the news. Considering the idea that cultural heritage is a borderless global wealth, it is important to highlight that “foreign government officials,” “foreign scientists,” and “foreign non-governmental organizations” are very rarely featured in the news. Foreign actors appeared in only 5 articles in total. This situation is a concrete indication that the topic of cultural heritage, which represents universal wealth and suffered significant damage in the earthquake, is not sufficiently embraced or supported by foreign actors.

This situation can be seen as a result of the macro perspective and homogenization brought about by globalization, which leads to the erosion of local cultures. The cultural erosion triggered by globalization and technology has caused a decline in international interest in cultural heritage, which serves as the footprints of the past. Consequently, this situation can be regarded as a weakness in the preservation of cultural heritage and its transmission to future generations in the global context.

**Table 6:** Distribution of News by Quality

Quality	Cumhuriyet	Milliyet	Yeni Şafak	Total
Statement	7	19	42	<b>68</b>
Claim	1	2	8	<b>11</b>
Critic	5	0	0	<b>5</b>
Expectation	2	1	8	<b>11</b>
Solution Proposing	4	8	15	<b>27</b>
Support	0	0	5	<b>5</b>
Informing	11	19	36	<b>66</b>
Standart	4	0	7	<b>11</b>
<b>Total</b>	<b>34</b>	<b>49</b>	<b>121</b>	<b>204</b>

Note: Multiple selections made on this question.

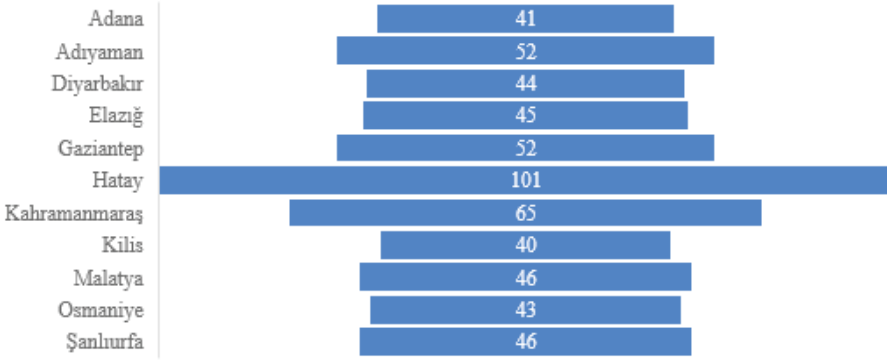
As one can see in Table 6, the most common type of news is “explanation” (68 articles). Typically, this category highlights statements from accredited sources regarding the damage to cultural heritage, its preservation, and sustainability. In terms of news type distribution, “informative” articles account for 32.3%, and “solution proposals” make up 13.2%. Informative articles and solution proposals generally rely on statements from scientists, representatives of non-governmental organizations, and officials from public institutions.

When evaluating the nature of the news in the context of newspapers, it is observed that

Milliyet and Yeni Şafak did not feature any “critical” articles, while 14.7% of Cumhuriyet’s articles were of a critical nature. Another noteworthy finding is related to the “support” type of news. While Cumhuriyet and Milliyet did not publish any support-related articles, Yeni Şafak published 5 articles of this nature.

When examining which type of news the newspapers prioritized the most after the earthquake in relation to cultural heritage, it is noted that Cumhuriyet prioritized “informative” articles, Milliyet equally prioritized “explanation” and “informative” articles, and Yeni Şafak primarily focused on “explanation” articles.

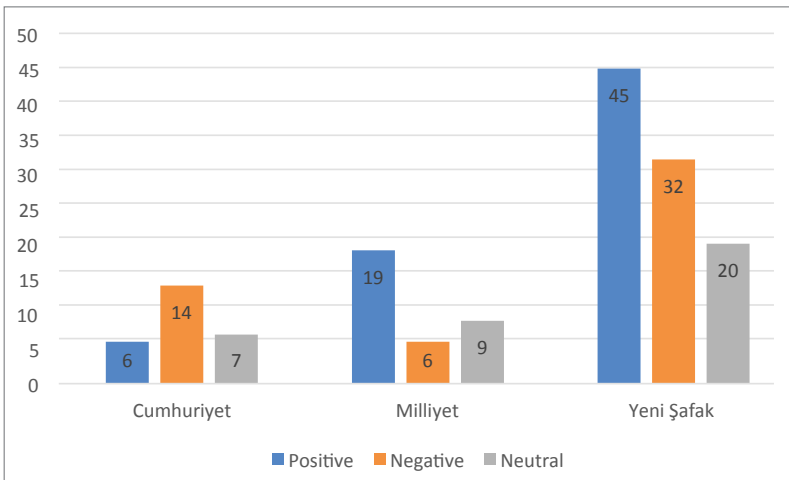
**Figure 5:** City Featuring the Cultural Heritage/Historical Artifact in the News



Note: Multiple selections made on this question

As seen in Figure 5, the top three cities most frequently mentioned in the news are Hatay (101 articles), Kahramanmaraş (65 articles), and Adıyaman (52 articles). This situation can be attributed to two reasons: firstly, the high number of historical artifacts in these cities, and secondly, the more intense destructive impact of the earthquake on cultural heritage in these locations.

**Figure 6:** Tone of Communication in the News



After the earthquake, one of the elements that adds a qualitative dimension to the content



analysis method used in this study, which analyzes cultural heritage news, is questioning the news in the context of “tone of communication.” As seen in Figure 6, a significant portion of the news published in newspapers, about 44.0%, falls into the “positive” quality category. Of the remaining news, 33.0% are negative and 23.0% are neutral and have been communicated to the target audience.

Although news related to destruction after a negative event like an earthquake is present, positive news focuses on two main points. The first is cultural heritage that “did not suffer damage” during the earthquake, and the second is efforts and projects related to restoring cultural heritage damaged during the earthquake to its former state. When questioning the tone of communication in the context of newspapers, it is noteworthy that Milliyet (19 news articles) and Yeni Şafak (45 news articles) newspapers prominently feature positive news. Cumhuriyet newspaper, on the other hand, appears to predominantly cover negative news in terms of communication tone. About 51.9% of this newspaper’s cultural heritage-related news articles consist of negative news. In general evaluation of the tone of communication in the news, considering the traumatic environment after the earthquake, the prevalence of positive news regarding cultural heritage, which individuals often relate to their lives, can be considered as a morale-boosting factor.

**Table 7:** Framing of Cultural Heritage/Historical Artifact in News Headlines

Frames	Presentation of Cultural Heritage/Historical Artifact News in Headlines	Cumhuriyet	Milliyet	Yeni Şafak	Total
<i>Frames of Responsibility</i>	Predictions about the Future of Cultural Heritage	4	9	6	19
	Warnings from Scientists	4	2	1	7
	Scientists’ Proposals for Solutions	3	6	9	18
<i>Impact Frames of the Event</i>	Damage to the Cultural Heritage	17	10	33	60
<i>Frames of Human Interest</i>	Preservation and Sustainability of Cultural Heritage	11	19	51	81
	Urban Belonging, Ownership, and Urban attachment	6	5	16	27
<i>Economic Frames</i>	Support of the President and Government Representatives	-	1	7	8
	Support Provided by NGOs in Türkiye	2	4	1	7
	Assistance from International Organizations	-	1	1	2
<b>Total</b>		<b>47</b>	<b>57</b>	<b>125</b>	<b>229</b>

Note: Multiple selections made on this question

The framing of headlines in cultural heritage/historical monument news has been

evaluated within the frameworks of responsibility, impact, human interest, and economic aspects.

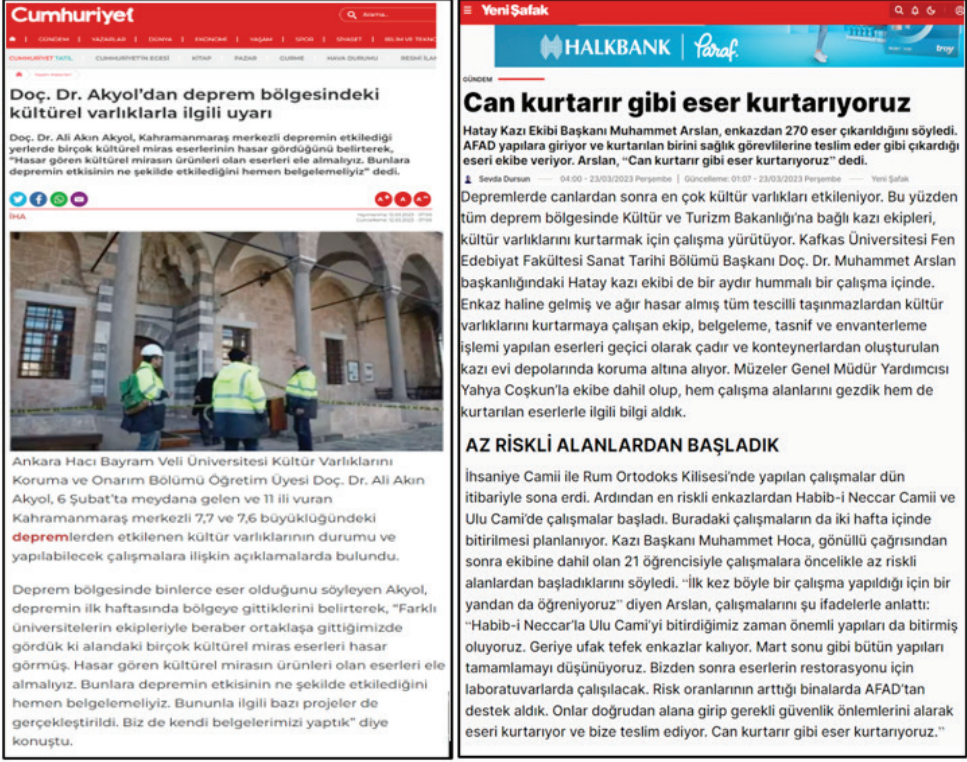


Photo 4: Examples of News Related to Responsibility Frameworks

Within the frameworks of responsibility, it is observed that predictions about the future of cultural heritage (19 headlines) and solutions proposed by scientists (18 headlines) are highlighted. Additionally, warnings from scientists (7 headlines) are also included in this framing of headlines. Examples from newspapers are provided in Figure 4 under the responsibility frameworks. Headlines such as “Warning from Assoc. Prof. Akyol regarding cultural assets in earthquake zones” in Cumhuriyet newspaper and “Rescuing monuments as if saving lives” in Yeni Şafak newspaper are evaluated within the responsibility frameworks.

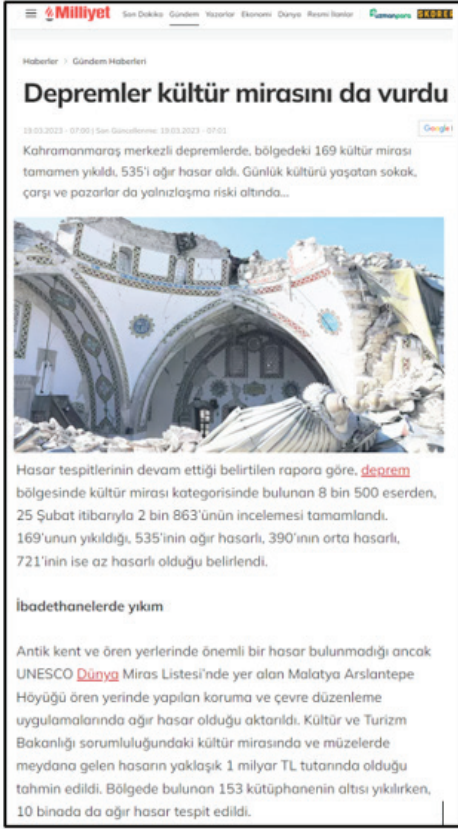


Photo 5: Examples of News Regarding Impact Frameworks

Examples related to the impact frameworks of the event can be seen in Figure 5. The focus is on the damage suffered by cultural heritage within the impact framework of the event. A total of 60 news headlines have been conveyed to readers within this framework. Examples of this framing include headlines like “Earthquakes also hit cultural heritage” in Milliyet newspaper and “Our memory also suffered damage: historical structures before and after the earthquake” in Yeni Şafak newspaper.





Photo 6: Examples of News Related to Human Interest Frames

Human interest frameworks constitute another category of framing news. Within the framework emphasizing the importance of preserving and sustaining cultural heritage for future generations, there are a total of 81 news headlines. This framing category is observed to be the most prominently featured presentation in all news headlines.

"Urban belonging, ownership" and "urban attachment" is another category within human interest frameworks, encompassing 27 news headlines conveyed to readers. Examples of headlines in this category include "Current situation in Antakya buried in silence captured from the air" in Cumhuriyet newspaper and "We will stand together: All religious leaders in Hatay mobilized" in Yeni Şafak newspaper (see Figure 6). These headlines serve as examples of this category, with notable emphases on human interest within their texts.

In Cumhuriyet newspaper's article, phrases such as "Thousands of buildings, historical structures, and businesses collapsed. Many stories of losing childhood friends, neighbors, memories due to earthquakes..." are included. In Yeni Şafak newspaper, the statement "Hatay, hosting the historical sites of three Semitic religions, once again came together with the earthquake. No matter what happens, we will rise together again, we will repair our streets steeped in history" is conveyed to the readership. These statements emphasize both the sustainability of cultural heritage and the relationship between cultural heritage and life.

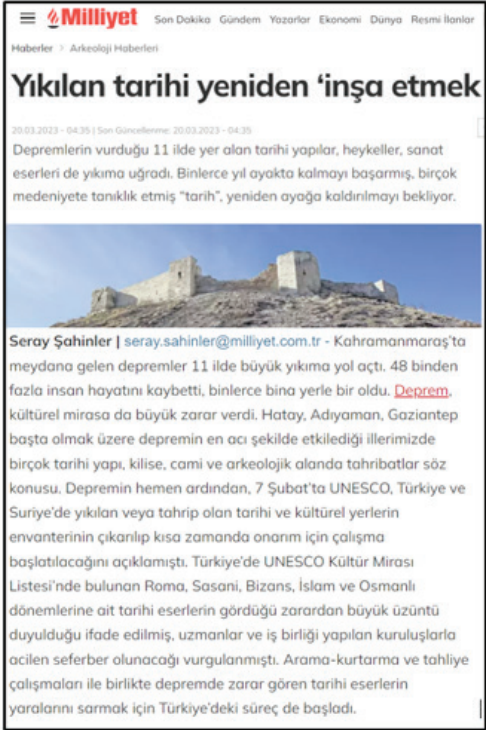


Photo 7: Examples of News Related to Economic Frameworks

Under the economic framework category of headlines, there are several sub-categories: "Support from the President and Government representatives" (8 headlines), "Support from NGOs in Türkiye" (7 headlines), and "Aid from international organizations" (2 headlines). Examples related to this framing can be found in Figure 7.

In a news article titled "Rebuilding the destroyed historical sites" published by Milliyet newspaper (see Figure 7), it was stated: "Immediately after the earthquake, on 7 February 2023, UNESCO announced that an inventory of historical and cultural sites destroyed or damaged in Türkiye and Syria would be compiled, and efforts for repairs would commence soon. It was expressed that there is great sorrow over the damage suffered by historical monuments dating back to the Roman, Sassanid, Byzantine, Islamic, and Ottoman periods listed on UNESCO's World Heritage List, and urgent mobilization with experts and collaborating organizations was emphasized."

Cumhuriyet’s article titled “Türkiye City Councils Union announced a 25-point disaster action plan: EMASYA call” included a section on “Establishing the ‘Cultural and Natural Heritage Guardians System’ for the preservation of cultural and natural heritage.”

When evaluating the quantitative findings related to economic frameworks in Table 7, it is noteworthy that Yeni Şafak newspaper prominently covers the category of “Support from the President and Government representatives.” Cumhuriyet newspaper, on the other hand, did not publish any news on this topic. Milliyet newspaper is most visible in covering “Support from NGOs in Türkiye.” The category of “Aid from international organizations” is the least represented within the economic frameworks.

These findings highlight how different newspapers frame and prioritize economic aspects related to the preservation and restoration of cultural heritage in their reporting.

**Table 8:** The main topic of the news

Topic	Number	Percentage
Cultural- Cultural Heritage	42	12,6
Memory- Cultural Memory	17	5,1
Civilization	10	3,0
History- Historical Artifacts	54	16,2
Museum	18	5,4
Mosque-Tomb	55	16,5
Church-Synagogue	26	7,7
Castle-Walls	22	6,6
Bazaar-Caravanserai	20	5,9
Historical Street	10	3,0
World Heritage Site	9	2,7
Urban Conservation Area	3	0,9
Restoration	14	4,2
Post-Disaster Process Management-Coordination	28	8,4
Future-Oriented Disaster Preparedness and Risk Planning	5	1,5
Others	1	0,3
<b>Total</b>	<b>334</b>	<b>100</b>

Note: Multiple selections made on this question.

In Table 8, distributions based on the primary topics of the news articles are examined. It is observed that some articles cover multiple topics. Among the primary topics, the top three most covered subjects in the news are “mosque-mausoleum” (55 articles), “history-historical monument” (54 articles), and “culture-cultural heritage” (42 articles). Besides these primary topics, the topics of Church-Synagogue (26 articles), Castle-Walls (22 articles), Bazaar-Caravanserai (20 articles), Museum (18 articles), and Historical Street (10 articles) are also prominent in the news, indicating the rich cultural fabric of the earthquake-affected region.



Another noteworthy point is that cultural heritage is indeed the memory of a nation, a fact reflected in the topics covered in the news. The topic of Memory-cultural memory is addressed in 17 articles. Learning lessons from earthquakes and planning for the future correctly are crucial for post-earthquake actions. It is observed in the examined articles that information on “Disaster Post-Process Management-Coordination” (28 articles) and “Future-oriented Disaster Preparedness Risk Planning” (5 articles) is shared with the readers.

## Results

In the context of framing theory, the first study conducted in Türkiye analyzing post-earthquake cultural heritage news has crystallized the following results based on the research objectives and questions. First of all, news related to cultural heritage shows a rapid decline over time, indicating a diminishing sensitivity from the media and a decrease in the topic’s on the media agenda. Besides, the content concerning cultural heritage is generally presented in a news format aimed at the target audience. On the other hand, opinion articles or analytical columns, which could present deeper thought and have intellectual impacts on the masses, have limited coverage of cultural heritage.

Investigative news stories involve the journalist’s special effort to explore cultural heritage in different contexts. Our findings show that investigative news stories are insufficient in our sample.

Another interesting finding is about the post-earthquake cultural heritage photography that three main themes stand out: damage to cultural heritage, the relationship between humans and cultural heritage, and pre-earthquake versus post-earthquake cultural heritage.

It is also notable that newspapers frequently rely on news agencies for cultural heritage stories, potentially leading to homogenization of coverage in this field. On the contrary, the absence of foreign official sources, private sources, and foreign news agencies in these stories indicates insufficient international attention to Türkiye’s cultural heritage post-earthquake. This argument is supported by the limited visibility of foreign actors such as foreign officials, foreign scientists, and foreign NGOs in the news. We read this as the homogenization created by globalization and the cultural erosion triggered by technology leading to a decrease in international interest in cultural heritage, which represents the footprints of the past.

It is clearly observed that the newspapers in the sample, which appeal to different readership groups, exhibit distinct responses in their representations of cultural heritage. This divergence has emerged in both quantitative and qualitative dimensions in the news analyses. Notably, *Yeni Şafak*, which represents an Islamist-conservative perspective, featured the most content related to cultural heritage. On the other hand, it is important to highlight that *Cumhuriyet*, which represents a national left-wing stance, primarily adopted a critical tone in its coverage of cultural heritage, producing content with a predominantly negative communicative direction. This “negative mirror image” is seen in the news content of *Yeni Şafak* and *Milliyet*. In contrast to *Cumhuriyet*, the communicative direction of the news in these two newspapers is largely positive. This outcome in the study can be attributed to the focus of *Yeni Şafak* and *Milliyet* on the efforts related to cultural heritage in the aftermath of the earthquake.

In the context of cultural heritage reporting, following explanatory news, it is important that informative and solution-oriented content has a prominent place, providing readers with high-quality information. Emphasizing positive news related to cultural heritage in communication is important, especially as it can serve as a morale booster for individuals who often relate their personal experiences to this subject, particularly in the traumatic aftermath of earthquakes. Headlines in cultural heritage news tend to adopt one of four main framing perspectives: (i) responsibility frames, (ii) event impact frames, (iii) human interest frames, and (iv) economic frames.

In the aftermath of an earthquake, cultural heritage news highlights three critical aspects which are cultural heritage serves as the memory of a nation; there is an inseparable link between cultural heritage and individual lives; and lastly, Türkiye boasts a rich and diverse cultural heritage.

As a result of our our findings, we recommend the following:

First of all, the media should maintain consistent sensitivity towards cultural heritage over time. Furthermore, cultural heritage issues should be addressed more frequently in opinion columns, which have the potential to influence public opinion effectively. The inclusion of more research-based articles is also necessary to provide a more integrated and comprehensive perspective on cultural heritage. Additionally, media coverage should aim to attract greater international attention to cultural heritage issues, particularly in the context of post-disaster recovery.

Strengthening the presence of news about cultural heritage on the agenda is critical, as it can raise societal awareness and influence policy decisions. We also expect future researchers to expand this research by including other forms of media, such as television and radio, which would provide a multidimensional understanding of the representation of cultural heritage in the Turkish media landscape. This broader approach could further enrich the findings and contribute to a deeper analysis of media practices related to cultural heritage preservation.

The media, playing a pivotal role in society, should serve as a bridge in managing post-disaster processes, coordinating efforts, announcing future disaster preparedness plans, and preserving cultural heritage. Media's emphasis on cultural heritage should not be limited to post-disaster scenarios like earthquakes but should maintain significant importance across all times and conditions.

### **Abbreviations**

UDHR: Universal Declaration of Human Rights

UNESCO: United Nations Educational, Scientific and Cultural Organization.

NGO: Non-Governmental Organizations

EMASYA: Safety-Security-Assistance Protocol (Emniyet-Asayiş-Yardımlaşma Protokolü)

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## References

- Aslantaş, M. (2023). Disaster communication from traditional media to social media, society and disaster relationship, *Cukurova University Journal of Social Sciences Institute*, 32 (2), 776 -789 DOI: 10.35379/cusosbil.1333879 <https://dergipark.org.tr/tr/pub/cusosbil>
- Atabek, N. & Uztuğ, F. (1998). Framing and highlighting in the news, *Journal of Kurgu*, 15, 96-105.
- Başaran İnce, G. (2010). Media and Collective Memory, *Culture and Communication*, 13(1), 9-29, ISSN 1301-7241
- Berelson, Bernard. 1952. *Content analysis in communication research*. Free Press.
- Boydston, A. E., Glazier, R. A., & Pietryka, M. T. (2013). Playing to the crowd: Agenda control in presidential debates. *Political Communication* 30 (2), 254-277. <https://doi.org/10.1080/10584609.2012.737423>.
- Bozkurt, S. G. (2023). Analysis of lost cultural landscape values in Hatay after the Kahramanmaraş earthquake, *Journal of Architectural Sciences and Applications*, [Special issue] 8, 124-141. DOI: <https://doi.org/10.30785/mbud.1331367>.
- Cereci S. (2019, April). Preservation of cultural heritage through media, ERASMUS international academic research symposium in educational and social sciences (5-6 April 2019 İzmir, Türkiye) *Proceedings*. Publishing director Muhammet Özcan (Director), Prof. Dr. Hasan Babacan & Assoc. Prof. Dr. Yüksel Akay Unvan & Assoc. Prof. Dr. Tuğrul Özcan (Eds) Asos, pp: 7-18.
- Çalış, S. (2010). *UNESCO and the masterpieces of the oral and intangible heritage of humanity and their effect on cultural policies*, Gazi University Institute of Social Sciences, Department of Turkish Folklore, [Unpublished Master's Thesis].
- ÇEKÜL Foundation, (2010). *From local to national, from national to universal, protection awareness development process*. Stil.
- Engin, A. (2023, 15 May). Levant corridor and earthquake. *Journal of Aktüel Arkeoloji*, Retrieved, April 11, 2024 from <https://aktuelarkeoloji.com.tr/kategori/arkeoloji/arkeoloji-levant-koridoru-ve-deprem>
- Erdem, T. (2022). The perspective of the international press to the Turkish economy from the perspective of framing theory: The case of Al Jazeera and BBC, *Journal of Communication and Social Studies*, 2(1), 43-57. <https://doi.org/10.29228/itamder.57814>.
- Erdoğan, İ. (2014). News framing: Theory and typology. *Marmara Journal of Communication*, 13(13), 35-52.
- EUR-OPA, (2024). Cultural Heritage, Retrieved, 9 May 2024, from <https://www.coe.int/en/web/europarisks/cultural-heritage1>.

- Emekli, G., (2005). The policies of the tourism in European Union and cultural Tourism in Türkiye, *Aegean Geographical Journal*, 14, 99-107.
- Entman, R.M. (1993). Framing: toward clarification of a fractured paradigm. *Journal of Communication* 43(4), 51-58. DOI:10.1111/j.1460-2466.1993.tb01304.x
- Fiske, J. (1996). *Introduction to communication Studies*. (S. İrvan, Trans.) Bilim ve Sanat.
- Gavilán, M. T. N. (2011). Framing the news: from political conflict to peace. How the framing theory and political context model can enhance the peace journalism model. *Journal of Latin American Communication Research*, 1(2), 48-61.
- Goffman, E. (1974). *Frame analysis: an essay on the organization of experience*. Harper & Row.
- Gross, T. (2002). Anthropology of collective memory: Estonian national awakening revisited, *Trames*, 4(6), 342-354.
- Güler, K. (2023). Thinking about cultural heritage with the destruction caused by the earthquake, *Architecture*, ISSN 1300-4212.
- Jokilehto, J. (2005). *Definition of cultural heritage references to documents in history*, ICCROM Working Group 'Heritage and Society'. (Originally for ICCROM, 1990) Revised for CIF: 15 January 2005). 1-47.
- Kadioğlu, M., (2014). *Social capacity development and community training*, ISMEP Guide Books.
- Kwak, H., Jisun A., & Yong-Yeol A. 2020. A systematic media frame analysis of 1.5 million New York Times articles from 2000 to 2017. In 12th ACM Conference on Web Science, pages 305–314. <https://doi.org/10.1145/3394231.3397921>.
- Macnamara, Jim. (2018). Content analysis. In P. Napoli (Ed.) *Mediated communication*, 191-211, De Gruyter Mouton. DOI:10.1515/9783110481129-012.
- Muşkara, Ü. (2017). Applications of new media on cultural heritage. *Erdem* (73), 89-110. <https://doi.org/10.32704/erdem.471009>
- Nora, P. (2006), Sites of Memory, (trans. M. E. Özcan), (Original work publication date: 1984), cited in Zelan, Z. (2022). The Use of New Media as a Cultural Memory Transfer Tool: Kültür Portalı Sample, *Journal of Eren*, 1(1), 14-31.
- ODTÜ TAÇDAM (2023). Historical environmental values research and application center, post-earthquake documentation of Antakya's multilayered cultural heritage, damage assessment and assessment, (unpublished report) METU, Retrieved, 24 March 2024 from <https://tacdam.metu.edu.tr>.
- Oğuz, M. Ö., (2007). UNESCO Culture and Türkiye, *Milli Folklor*, 73, 5-11.
- Shinki, C. Haoyi, X. Masashi, M. (2023). Backscattering characteristics of SAR images in damaged buildings due to the 2016 Kumamoto earthquake. *Journal of Remote Sensing* (15), 2181, 2-18, <https://doi.org/10.3390/rs15082181>
- Türkbay, Ö. Ç., (2021). The relation of the cultural heritage protection with human rights law and the cultural heritage as a right. *Dokuz Eylül University Faculty of Law Journal*, (23) 2, DOI: <https://doi.org/10.33717/deuhfd.998243>
- UNESCO, Retrieved, April 15, 2024 from <https://www.unesco.org/en/world-heritage>
- UNESCO Turkish National Commission (2024). Retrieved, April 15, 2024 <https://unesco.org.tr/>

- Uzun Varnacı, F., Somuncu, M. (2023). Evaluation of the Antakya urban cultural heritage after the earthquakes, *Ankara University Journal of Environmental Sciences*, 10(1), 9-23.
- Uzunel, A.T. (2023). Earthquakes and archaeological heritage sites: The case of February 6 earthquakes in Türkiye, *The Journal of International History Researches*, 7(1), 57– 77.
- Ünal, G.Z., (2014). *Protection of cultural heritage*, ISMEP, Guide Books.
- Vural, A.M., Boztepe Taşkiran, H., Türkoğlu, S., Sarı, M., et al., (2022). Traditional media in risk communication: analysis of newspaper news on the sample of earthquake disasters, *Journal of Selçuk Communication*, 15(2), 672-701, DOI: 10.18094/ JOSC. 1116550.
- Zelan, Z. (2022). The the use of new media as a cultural memory transfer tool: Kültür portalı sample, *Journal of Eren*, 1(1), 14-31.



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*Araştırma makalesi/Research article*

# Media and Memory on the 6 February 2023 Earthquakes: The Case of Malatya

6 Şubat Depremlerinde Medya ve Bellek: Malatya Örneği

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## Abstract

Media enterprises created an environment where it is possible to store and recall information outside of the human memory. As a result, we may view media enterprises as memory spaces. It is important to refer to the memory institutions and media workers' testimonies with their ability to function as tools that enable recall particularly in extraordinary times. One such case of extraordinary times in the scope of this study is the earthquakes that occurred on 6 February 2023, whose epicentre was the province of Kahramanmaraş, impacting eleven other provinces of Türkiye. We selected Malatya province as the main universe of the study as it was among the three most impacted provinces in the February 6<sup>th</sup> earthquakes. We chose to focus on ER TV as the sample because it was the television channel which broadcasted locally for about 30 years in Malatya province, and it was

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one of the most widely viewed television channels in the region. In this context, the study aims to understand the testimonies of the local media workers of the earthquake and to determine how the viewers affected both the process of the earthquake and the perception towards the post-earthquake stage. The main reason to select Malatya province as the main universe of this study is related to our methodology in this study. We opted to use the ethnographic interview method. We conducted interviews with four workers of the ER TV channel, a well-established media enterprise in Malatya. As the interviewers, our experiences and participants' testimonies allowed us to examine the reality of the earthquake *from within*. As a result of the interviews we conducted with the channel employees who had experienced the earthquake, we found the following: (1) The local television channels reported the degree of impact of the earthquake on the cities more in detail compared to the national television channels, (2) The channel workers were able to observe the events around them more *from within* as they were earthquake victims themselves, and for most of them, this was the city where they were born and raised, (3) The local media workers were more knowledgeable about the city streets, its structures, and history compared to those of the national media, (4) They could address the problems that the local public encountered more aptly, (5) They worked just like a social aid organisation and collected funds for those in need, (6) They could create agenda that would draw politicians' attention to the city with their news reports, and (7) They managed to keep the effects of the earthquake current by using the social media actively.

**Keywords:** *earthquake, Malatya, media, memory, ethnographic interview*

## Öz

Medya kuruluşları, insan belleği dışında verilerin depolanabileceği ve ihtiyaç dahilinde hatırlanabileceği bir ortam oluşturmuştur. Bu sebeple de medya kuruluşlarını birer hafıza mekânı olarak değerlendirebiliriz. Özellikle olağanüstü dönemlerde medya kuruluşlarının hatırlamayı mümkün kılan birer araç niteliğinde olan arşivlerine ve çalışanlarının tanıklıklarına başvurmak önemlidir. Çalışma dahilinde söz konusu olağanüstü döneme ait örnek olay, Türkiye'nin 11 ilinin etkilenmiş olduğu Kahramanmaraş merkezli 6 Şubat 2023 tarihinde gerçekleşen depremlerdir. 6 Şubat depremlerinden en çok etkilenmiş ilk 3 il içinde yer alan Malatya ilini çalışmanın ana evreni, Malatya ilinde yaklaşık 30 yıldır yerel düzeyde yayın hayatına devam eden ve bölgenin en çok izlenen televizyon kanallarından biri olan ER TV'yi ise çalışmanın örnekleme olarak seçtik. Bu bağlamda çalışmanın amacı, yerel medya çalışanlarının depreme ilişkin tanıklıklarını anlamaya çalışmak ve seyircinin hem deprem sürecini hem de depremden sonraki süreci algılama aşamasına nasıl etkide bulduklarını tespit etmektir. Çalışmanın ana evreni olarak Malatya ilini seçmemizin temel nedeni çalışmada tercih ettiğimiz yöntem ile doğrudan ilişkilidir. Çalışmada etnografik mülakat yöntemini tercih ettik ve Malatya'nın köklü medya kuruluşlarından biri olan ER TV kanalı çalışanlarından dört kişi ile mülakatlar gerçekleştirdik. Mülakatı gerçekleştiren

kişiler olarak bizlerin depreme yönelik tanıklıkları ve katılımcıların tanıklıkları deprem gerçeğine *içeriden* bakabilmemize olanak tanıdı. Deprem tanıkları olan kanal çalışanları ile gerçekleştirdiğimiz mülakatlar sonucunda: (1) yerel televizyon kanallarının ulusal televizyon kanallarına göre şehirlerin depremden etkilenme durumlarını daha ayrıntılı paylaştığını, (2) yerel televizyon kanalı çalışanlarının aynı zamanda birer depremzede olduğundan ve birçoğu doğup büyüdüğü şehirde görev yaptığından çevrelerinde yaşananlara daha *içten* bakabilme imkanına sahip olduklarını, (3) şehrin sokaklarına, yapılarına, tarihine ulusal medyaya göre daha hakim olduklarını,(4) halkın sorunları ile daha yakından ilgilenebildiklerini, (5) adeta bir sosyal yardımlaşma kurumu gibi çalıştıklarını ve ihtiyaç sahipleri için yardım topladıklarını, (6) siyasilerin dikkatini şehre çekecek haberler yapıp gündem oluşturabildiklerini, (7) sosyal medyayı aktif olarak kullanıp depremin tesirlerini güncel tutabildiklerini tespit ettik.

**Anahtar sözcükler:** *deprem, Malatya, medya, hafıza, etnografik mülakat*

## Introduction

Interest in and the need for studies on the earthquakes of February 6, 2023, which affected eleven provinces in Türkiye, including analyses of the crises that emerged in the aftermath, have grown significantly. In fact, 93% of the Turkish land is in the earthquake zone, facing a risk of an earthquake. For this reason, data gathered from the field related to pre- and post-disaster periods are highly valuable. Our study presents data on the 6 February earthquakes and the recovery after the earthquake incidents because it is a fitting study for this purpose.

We conducted this study on four employees of ER TV, a television channel that operates locally in Malatya province, through ethnographic interviews. Our methodology was based on Jan Assmann's (2015) view that electronic culture can be the bearer of memory and Pierre Nora's (2006) idea of memory places. In this study, we considered ER TV as the memory space of Malatya province. The expressions and observations of the witnesses of the earthquake who were also the workers of the channel at the same time enabled us to determine the degree to which the media was effectively employed for perceiving and recalling the earthquake.

The basic aim of our study was to make visible the memories of the province of Malatya via ER TV workers' testimonies after the 6 February earthquakes. In this study, the concept of *memory of earthquakes* encompasses both the elements related to pre- and post-earthquake physical conditions, work conditions, and broadcast content of the media enterprise, as well as the contact of the media enterprise with the national press after the earthquake, such public institutions as AFAD (Short for "Disaster and Emergency Management Presidency" in Türkiye), city authorities and the public. These comprised the themes on which we focused in the interviews.

ER TV commenced broadcasting in 1994 at the local level through the satellite system as of 1 July 2015. Focusing on this channel allowed us to compare the circumstances of Malatya province before the earthquake and the developments that emerged after the earthquake because this media enterprise had been broadcasting issue about Malatya for about 30 years.

At the time of the study, the general broadcasting director of this channel was Mustafa Eren, and the responsible director was Burak Altun. Besides TÜRKSAT 4A satellite, the channel is available for viewing on such digital viewing platforms as Digiturk, ARTI Digital media and Blu TV as well as all smart ip televisions (ER TV, 2024a).

ER TV constantly updates its viewer ratings on its web site and creates exclusive news texts on these ratings. According to the news published on the official web site of the channel dated 1 February 2024, based on the Admongrel Analytics rating measurement system data, the number of ER TV's daily viewers reached a figure between 7.5-10 million, and following the 6 February earthquakes, the channel became the most viewed television channel in the earthquake region (ER TV, 2024b). In the news on this topic, the following statements highlight this:

ER TV is undertaking a social responsibility by taking on a role in the restoration of the city after the Kahramanmaraş earthquake sequence of M7.7 and M7.6 on 6 February by functioning not only as the citizen's voice but also as a bridge for the citizens by helping them keep up with the news of their hometown which they had to abandon, help understand the extent of the damage in Malatya more clearly, and help meet their needs and demands in the city through the constant and uninterrupted live broadcasts, programs, and news content from Malatya, which suffered great damage. (ER TV, 2024b)

We observed that the content of this news piece published on the channel's own web site is consistent with the channel's activities after the earthquake. For this reason, we decided that ER TV possessed the characteristics of a sufficient memory space where one could follow the traces of the memories stemming from the disaster experienced in Malatya province.

We conducted interviews with four individuals from ER TV, which we regarded as a memory space in the context of this study. The individuals that we included in the study had personally experienced the earthquakes on the 6 February and witnessed the events related to the disaster as they continued to broadcast news about the post-earthquake events. The reason that the number of interviewees in this study was only four individuals was due to the decline in the number of personnel employed in the channel following the earthquakes. As a result, we conducted interviews with the following individuals: (1) B.A. is both the responsible director and program director of the channel; (2) H.K. is the channel program producer and presenter; (3) Ü.G. is a presenter in the channel and an active worker in the field; and (4) E.K. is the news director of the channel. The first interviewee we contacted was H.K. When we mentioned the aim of our study, H.K believed in the study's potential to help spread the news about the damage that the earthquake caused in Malatya and make the work of the channel more visible, thus accepting to guide us to contact the other interviewees. We conducted four interview sessions with H.K. and the three other participants that we contacted through H.K. between 25 May 2024 and 25 September 2024. The location where we conducted the interviews was the container which was the participants' working space. Following the interviews, we deciphered the audio recordings and formed five categories that gave a direction to our study from their common statements. We determined the categories as, (1) the changes in the working conditions in the local media after the earthquake, (2) the

contacts that the local media established with the national media after the earthquake, (3) the broadcasts that local media made about the damage caused by the earthquake particularly in Malatya, (4) the contributions of the local media in crisis management after the earthquake, and (5) the changing broadcasting policies of the local media after the earthquake.

## 1. Methodology

In this study that we aimed towards understanding the 6 February earthquakes in Malatya with the focus on ER TV, we used the ethnographic interview method to benefit from the local media participants' testimonies and pre-/post-earthquake observations of the city more effectively.

We can define ethnographic interviews as "people's activities that we are trying to understand and the endeavour to make meaning out of the events that they are a part of" (Sevgi, 2024: 1134). This method encompasses gathering information about the past experiences of individuals by asking questions. The ethnographic interview, which aims to gain an understanding of the emotional experiences related to the contexts and activities (Canniford, 2005), is based on human experiences and the subject is the witness of history, which makes the method suitable for this study. Because this method is aligned with questions related to human memory and emotions, it is possible to collect information which is unrecorded in official sources. Usually, the actors of ethnographic interviews are ordinary people, thus making it possible for researchers to examine the situations *from within* through interviews conducted in natural environments.

In our study, the official sources present information about the number of citizens who lost their lives in earthquakes, the magnitude of the earthquakes, the provinces affected, and the numerical data of the collapsed buildings, while ethnographic interviews transcend these data as they are structured upon the events experienced and witnessed. These experiences are important for our country where earthquakes occur periodically and very often. Ethnographic interviews can bring to light disaster-related traumas and report the unfavourable circumstances caused by disasters in their true scale. In this respect, the ethnographic studies conducted on hurricane Katrina in the USA are worth mentioning. For instance, in the study called *Cultural Trauma, Memory, and Gendered Collective Action: The Case of Women of the Storm following Hurricane Katrina*, Emmanuel David (2008) stated that following the hurricane, many of the individuals in the country commented that the hurricane was no longer effective and that the locals survived the damage caused by the disaster, while an activist group called *Women of the Storm* functioned as the disaster's memory space and told the administrators and global media viewers about the facts about hurricanes. Owing to the work of this group, *Women of the Storm*, the authorities learned about the requests for assistance from the local public and the need to implement new policies towards hurricanes.

We see the ER TV as the memory space in our study just as *Women of the Storm* was in David's work. Through our ethnographic interviews, we observed that the reality of the earthquake was different from how it looked in the national media, just as in the hurricane Katrina incidents mentioned above. We were able to examine the events *from within* by

going beyond the stereotyped perceptions related to earthquakes. In this way, we aimed to contribute to the process of “reporting that place to the people who were not in that place” as emphasized by Figen Balamir (2023: 39).

In this first part of the paper, we examined the media concept as a memory space and discussed its role in shaping memory, recalling, and forgetting. In the second part of the paper, we dwelled upon the importance of the media and news reporting in meeting the communication needs at times of disasters as well as the contributions of the media in the disaster period. The last part of the paper presents the methodology of the study and ethnographic interviews conducted with four ER TV employees as the sample of our study.

## 2. Media as a memory space

Today mass communication is digital, and we transform data into digital codes, increasing the importance of memory by the day. In fact, recall is progressively difficult in the *speed era*. This difficulty entails other fears, making memory studies the centre of attention in a multidisciplinary field. As we approach the end of the 21st century, we turn our gaze frequently to the past to see and evaluate our position in the passage of time (Huysen, 1999: 11). This turning back is a call to the memory, and thus a call to the past. In his work on cultural memory, Jan Assmann, whose ideas we used in our study, states that the hankering to and curiosity about the past emerge particularly in extraordinary times. Disasters that impact human history deeply and such events as crimes against humanity face the fate of fading from memory as the lifespan of the generation who witnessed these events first-hand ended. The reason is that loss entails losing the witnesses of the past at the same time (Assmann, 2015: 17–18). The fear of losing the past facilitated the rise in the interest towards the studies that function as agents of public memory and exploration of memory.

Besides Assmann, we should note the work of Pierre Nora being inspirational for our study. Nora stated that memory forms history, and thus, each memory space may dissolve the ambiguities of both the nations and memories (2006: 10). What Nora means by memory spaces goes beyond the boundaries of walls: sometimes an archive document, a monument, or the memory of a person can be memory spaces (2006: 9). We may use the term *memory reservoirs* to stand for the physical spaces that activate memory and contribute to recall (Gross, 2002). In this study, such a memory space/reservoir was a television channel. In fact, as José van Dijk (2008: 71) phrases it, media and memory are two concepts that we cannot conceive of separately. Media strengthens memory, while sometimes it may corrupt memory, broaden it, or even replace it. For this reason, media is a principal element that shapes our lives.

Alison Landsberg (2004: 2–3) proposed a memory type that emerged from media, which she called *prosthetic memory*. With the help of the media, which forms prosthetic memory, individuals not only grasp a historical event, but they can also possess the memory of that past event that they never personally experienced. In this way, memories that form as a reaction to the refractions of modernity no longer belong to one specific group due to the activities of the media. For instance, the memories of the Holocaust no longer solely belong to the Jews, nor

do the memories of slavery only belong to the Africans living in America. Within the scope of our study, the events witnessed and experienced in the 6 February earthquakes broadened its impact space by growing beyond the reality of the eleven provinces impacted by the disaster in the example of ER TV, which functioned as a prosthetic memory. The 6 February earthquakes are now under the protection of *mediatic memory* “a form of recall which stores information related to semantics, public, recent history recall forms” (Sözen, 1997: 13).

### 3. Media and journalism during disasters

Disasters can be natural, human, or technological events that affect society directly or indirectly and change people’s ordinary flow of life (AFAD, 2024). One of the key factors in the proper management of disasters is disaster communication because the communication process before, during, and after a disaster has the power to change the degree of the disaster’s impact on the society.

Disaster communication emerges as an essential need because people’s routine life conditions disappear in the event of a disaster. People who want information about where they will live after a disaster through various media channels question how and when they can reach an ordinary flow of life (Ostertag, 2023: 5). Online citizen journalism projects, civil society and aid organisations, disaster response organisations and people involved in disasters can develop various disaster communication models through digital media (Matthews & Throsen, 2022: 232), thus more effective disaster response methods can take place.

The use of media to reduce the damages of disasters through post-disaster communication plays a critical role in the disaster management process (Dufty, 2023: 13; Mavi, 2020: 48; Şahin & Zengin Demirebilek, 2023: 330). Pre-disaster communication usually takes place in the form of risk communication. However, especially after a disaster, the media conveys the information needed by the society and contributes to the communication process in disaster management. The media has such functions as understanding the extent of the disaster, supporting the public to overcome the shock of the disaster, learning from the experience, and making positive contributions in raising awareness of disasters (Toker, 2016: 255).

Media is an indispensable tool in post-disaster crisis management because it enables mass communication. Houston et al. (2019) made significant observations about the function of the media in crisis management in their study in which they conducted interviews with expert journalists. They pointed out that primarily journalists can better observe and make news of the needs of the public on the platforms that could be set up after a disaster, and thus they could be the close followers<sup>1</sup> of the disaster. Moreover, they reported that maintaining interactions between the journalists and disaster-stricken people is an ethical responsibility (Houston et al., 2019). ER TV, which we selected as the memory space for our study, observed the disaster closely just as shown in the examples above. It strove to solve the problems of the locals of Malatya by bringing their needs to the agenda particularly after the disaster, thereby participating directly in crisis management.



Media also contributes to the formation of memory related to disaster through disaster journalism (Antunes et al., 2022: 522). News that keeps a record of such extraordinary times as disasters also determines the manner with which the public memory grows. For this reason, the framework in which media reports the disaster will determine the kind of memory that the media will transfer to the future.

The Kahramanmaraş earthquakes of 6 February were the largest disaster experienced recently according to the official records. There is a growing interest in the role of the media in this period and the studies on disaster news. The studies into the role that the media played in this large-scale disaster, which is now forever in public memory, are important to understand the significance of our study and the memory that was formed.<sup>2</sup> Emrah Budak (2023) conducted a study on the news related to the 6 February earthquakes using content analysis method and made detections on the role of the Turkish media in disaster journalism. In this respect, the researcher stated that the news (1) generated after the 6 February earthquakes were reported with a political dimension instead of raising public awareness, (2) highlighted rubble clearance work and traumatic elements, (3) were prepared with ideological concerns in mind, and (4) tried to give a form where “disaster was normalized”, and thus Turkish media failed to perform the functions that they were ideally expected to perform in disaster management (Budak, 2023: 1106-1109). Sertaç Timur Demir (2023: 712) focused on the breaches of media and ethics during the events of the 6 February earthquakes in his study and stated that the media reported the news of the post-earthquake events with manipulative content, causing information pollution.

Nevertheless, there were studies reporting beneficial functions performed by the media on the 6 February earthquakes. Fırat Ata (2023) examined media shares through netnography method and found that social media performed the functions of informing the *public memory* as well as offering an arena for such public-focused functions as complaints, suggestions, forming public opinions, prevention, and requests. Particularly the “public memory” function which emphasizes the importance of learning the lessons from disasters (Ata, 2023: 623) is one of the principal functions of the media in the disaster period and disaster journalism. In our study, we may state that the TV channel strove to form a public memory by both focusing on the lessons to learn from the disaster and solving the problems faced by the local public after the disaster, as it tried to perform a beneficial function through disaster journalism.

In this respect, the media may be a guide for both positive and negative situations through the memory that it forms in disaster times. The memory that disaster-struck regions formed by the local media has the power to reveal the region’s issues and disruptions it suffers much more clearly. In our study, ER TV, the sample of our study, focused on the issues that the national media failed to make visible, which afforded the chance to view the disaster *from within* for it was also a survivor of that disaster. Therefore, we can state that constructing public memory with the agency of local testimonies bearing the lived experiences is of particular importance to establish awareness and consciousness of disasters.

#### 4. Speaking to the past: interviews on the traces of 6 February in Malatya

On 6 February 2023, a series of earthquakes in Pazarcık (magnitude 7.7) and Elbistan (magnitude 7.6) districts of Kahramanmaraş affected eleven provinces of Türkiye, namely Kahramanmaraş, Hatay, Gaziantep, Malatya, Diyarbakır, Kilis, Şanlıurfa, Adıyaman, Osmaniye, and Adana (AFAD, 2023: 1). According to the latest statement of the Minister of Interior, Ali Yerlikaya, a total of 53,537 people lost their lives, and 107, 213 people sustained injuries in the earthquakes (TRT Haber, 2024). The provinces that suffered the most damage in the earthquake were Kahramanmaraş, Hatay, Adıyaman, and Malatya. According to the report of the Presidency of Strategy and Budget, 55.6% of the houses in Malatya were damaged (Habertürk, 2023). The “Earthquake Status Chart”,<sup>2</sup> published by the Governorship of Malatya on 8 May 2023, reported the number of “Destroyed-Emergency Demolition-Heavily Damaged Buildings” as 45,000 (Governorship of Malatya, 2023). Consequently, Malatya sustained severe damage due to the 6 February 6 earthquakes and the aftershocks that followed. The closest observer of this damage was ER TV, one of the leading local television channels in the city. This part of the paper presents the ethnographic interviews conducted between 25 May 2024 and 25 September 2024, with four employees of ER TV. While conducting the interviews, the researchers chose not to use structured interview forms due to the nature of ethnographic studies, so the interviews took place in a conversational atmosphere in personal office environments where the participants would feel safe.

##### 4.1. Changing working conditions of local media after the earthquake

Within the scope of the study, we first asked the participants to compare the physical conditions of the media organization in which they were employed before and after the earthquake. Thus, it was possible to make visible the effect of the destructive impact of the earthquake considered as the primary destruction of the earthquake on the functioning of the organization. While talking about the damage that the earthquake caused to the media organization, E. K. (1989, Malatya) said the following:

Our building was heavily damaged. We don't have our old materials anymore. We don't have our previous income. From a 6-story building, we now started broadcasting in a single-story steel construction building. We had two large studios. We started using a single studio. I mean, you can't see much on the screen, can you? The viewer doesn't realize it when they look at it, but when we were in it, for example, we had less material. The earthquake damaged much of it. We broadcasted in a container for about a year, and it was the first time we broadcasted under those conditions. We used one container as a studio and two as workspaces, so we had a severe problem. In fact, when water dripped into the container, for example, we kept a bucket in front of it so that our remaining materials and computers would not be damaged. Yes, we broadcasted under those conditions.

B. A. (1980, Malatya) said,

Apart from the building, we have serious losses in terms of equipment. The number of personnel has also decreased. Right now, I have one camera operator, one main controller, and one montage person. The market conditions are exceedingly difficult for us. We cannot hire any staff right now,

emphasizing that the channel lost not only its building but also its existing workforce due to the earthquake. Like the other participants, H. K. (1973, Malatya) stated that the physical conditions of the channel before the earthquake were outstanding for a local channel, but after the earthquake, they continued broadcasting under impoverished conditions, first in a gazebo and then in a container.

For ER TV, the earthquake not only caused the loss of buildings and employees, but it also led to radical changes in broadcast content. B. A. emphasized the great drop in the number of programs on the channel after the earthquake in the following words:

Before the earthquake, I was doing forty-four programs. Forty-four of our own internal productions. Forty-four people, Forty-four programmers, editors, and the like. We collaborated with a serious team. We had a team of ninety people in total, but that could reach one hundred people with external support. After the earthquake, a few of our technical staff had to leave. How many programs do we have now? We dropped from forty-four programs to four programs.

H. K., on the other hand, stated that there was a transformation in the content of the programs along with the number of programs and said, “We make programs entirely on earthquakes. In fact, I do programs six days a week for three hours in the mornings and three hours in the evenings twice a week, mostly on earthquakes”. This participant added that they restructured the broadcast format of the channel completely in the aftermath of the earthquake.

Our informant Ü. G. (1992, Bingöl), like B.A., stated that the serious decrease in the number of personnel after the earthquake affected the content of the programs. Ü. G. said, “Before the earthquake, we worked with more personnel and we could also make national news, but after the earthquake, due to the decrease in our personnel, we focused only on local news, because Malatya really received a lot of damage, so it became a city we had to focus on. That is why we started making only local news,” and emphasized that the channel’s programs after the earthquake aimed at making Malatya’s voice heard.

#### **4.2. Post-earthquake contacts with national press**

Another question asked to the participants was about their relations with the national press during the earthquake. All four participants answered questions about their contacts with the national media during this process. B. A. talked about the connection to CNN Türk live broadcast immediately after the earthquake and crying during the broadcast due to the shock of the events. B.A. said, “Malatya was completely destroyed. What can I say? Believe me, I do not normally talk like this”. Following the development, B. A. recounted his experience in the following words:

First, I took my family to a safe zone, and then I came to the television station. A national channel connected me to a live broadcast. It was the first connection. Most people were still unaware of the incident. I am not a journalist. I am a TV person. They connected me with that reflex, but I am simply a citizen who lived through the incident. You know, imagine your friend in front of you under the rubble. I told my feelings in a slightly high tone. With that reaction, they understood the importance of the event, and most of

the national channels came to Malatya first thing in the morning. I mean after that first connection. I may have been instrumental in the national press coming to Malatya.

One of our participants, H. K. emphasized that for most of the journalists in the national press, Malatya was in the background, and the reason for this was its political dimensions. H. K. underlined:

The national press asked us for help, but Malatya was far behind in this regard. Because the politicians said that Malatya was not one of the cities that had experienced the earthquake and that everything was fine. In fact, AFAD had not included Malatya in the classification of heavily damaged provinces, and Malatya could not benefit from a short-term working allowance. Hatay was number one in terms of the number of people who died and the number one in terms of collapsed buildings, and Malatya was in second place. The people of Malatya also failed, and could not succeed, in other words, they could not make their voices heard. Hatay used the social media very successfully, Kahramanmaraş, and Adıyaman. All of Türkiye saw those regions. That is why the national press came to Malatya from time to time and tried to get support from us from time to time.

In this context, this participant emphasized that both the politicians and the citizens of the city failed to emphasize the proper level of urgency. Participant Ü. G., just like H. K., emphasized that the publications in the mainstream media expressing Malatya's problems after the earthquake were insufficient. Ü. G. underscored this in the following:

Mainstream media tries to avoid bringing up too many problems and issues, as we have already seen in the period following the earthquake. They said there were not many problems in Malatya. Unfortunately, this was based on the death toll. Since the number of deaths was low, the inference was that there were not many problems in Malatya in general, but unfortunately Malatya is second only to Hatay in the provinces where the destruction was intense.

These statements show the lack of a critical approach in the mainstream media after the disaster and that they failed to sufficiently share the existing problems with the public. In this context, local media organizations filled the existing gap and brought the problems of the local people and the region to the screen. E. K. said the following:

When the agencies shared our earthquake footage, the national press benefited from it. Apart from that, as you can appreciate, since the local channel of this city knows the city better, they can tell the story better. For example, they can tell the name of the street they go to, the person they talk to knows what was there before, so I think that is why we were able to talk more about the damage. We have repeatedly called on the national media in this regard. We tried to get them to come to Malatya, but not much happened. Since Kahramanmaraş was the epicentre of the earthquake rather than Malatya, the interest was more there.

In this context, ER TV, as a local media organization, had the chance to look at the events from the inside. The other participants used similar expressions to E. K. regarding the power of the local media. B. A. said the following:

The national press focuses only on one place, such as on saving lives. But we showed all kinds of developments, the city in general. Street by street, which building was damaged, which building collapsed. Because I am a good Malatyalı, I am a child of this land, I am a person who knows every street very well. Yesterday, for example, while walking on the road, they said that this brother's shop collapsed, and this sister had this problem. Since people saw this sincerity from us, they watched us more because they believed in this sincerity. Our viewer rates increased rapidly.

This participant stated that they experienced the advantage of knowing the city and being a child of this city.

H. K., on the other hand, referring to Fulya Öztürk from the national press, commented that she could broadcast what happened in such accurate detail because she had stayed in the field in Hatay for a long time and had a good command of the situation. This participant stated the following:

What we experienced here and what the national media showed are completely different things. Members of the media would get off the plane, take two tours around the city, examine the sight, and leave the city in the evening on the same day. There is a song by the late Ahmet Kaya that goes like this: "How will you know what I went through?" Our situation is the same. Those in Hatay died, those in Kahramanmaraş died, those in Adiyaman died, those in Malatya did not die, they are still crawling.

Emphasizing that the national press is lacking in conveying what happened, in another statement, H. K. said the following:

I don't remember the time exactly, it must have been around 4.30 or 5.00, but because there were so many earthquakes, a national news agency went live in the area where the containers were. I was also watching television. The presenter pointed to the empty dark buildings and said, "They turned off the power, people must have gone outside". No! Those houses were already empty because people had abandoned them that day. The media thinks that life is going on in all the houses that are still standing. No, the lights are off because people don't know the damage to their houses. There are still thousands of buildings in Malatya with heavy damage that they have not demolished the buildings. They are still planning to demolish over 10 thousand buildings. The situation in Malatya is so severe that many people are unaware of it. Some are in court; some are dragging on in the courts.

With these words, H. K. stressed that to convey the damage in Malatya accurately, it is necessary to be a person of this city and to have a good command of what is happening in the city, otherwise misleading information and interpretations may emerge. This emphasis of H. K. was frequently repeated by other participants, as well.

### **4.3. Television broadcasts about the destruction caused by the earthquake**

Media organizations work as a memory that stores information to make sense of and remember recent history (Sözen, 1997:13). For this reason, the information stored especially about crisis situations is important. In the words of Landsberg (2004), media is like a *prosthetic memory* and through the media, memories and experiences are in constant circulation from mind to mind.

Within the scope of this study, after asking the participants about their contacts with the national press, they answered questions about their contributions as local media organizations in creating the memory of the earthquake. E. K. said the following about this question:

I think we were able to detect better because we know most things locally. For example, we had the chance to show them one-to-one in the live broadcasts we made in front of the buildings. Of course, most of what we did was also covered in the national media, but we followed more closely some of the things that exist in both the post-earthquake and the current construction process that we have noticed that the national media failed to notice. The national press does not follow these processes anyway. For them, the first moment of destruction of the earthquake was more important. Right now, for example, when cities are recovering, the national press is only interested in how many houses have been built and how many have been handed over. I think this is all the national press is interested in. Local media is more familiar with the city and the news. When the minister answers the questions of the press, the regular national announcers do not ask questions about reserve areas, on-site transformation, the new plan of the city, the fate of historical monuments, etc. because they do not know the city, they look at the events from a distance. But here, for example, which neighbourhood is the reserve area, how many buildings are there in that neighbourhoods selected as a reserved area, which is damaged, which will be demolished, and which are intact, we are already in all of these, we know them all.

E.K. stated that the national media focused only on numbers after the earthquake and did not follow up on the recovery processes and projects of the cities. According to E. K., this is one of the main points that distinguished them from the national media. Since local media members are also earthquake survivors and worked in the city they lived in, where they were born and raised, they were comparatively more active in conveying the problems of the city.

Barbie Zelizer (2008) mentions that a member of the media needs knowledge of the past to appraise the development of the present. Another emphasis of E. K. confirms Zelizer's conclusion. E. K. said the following:

As I said before, since we are an old television channel, we have a particularly good archive. Of course, some of the archive was lost in the earthquake, but we still have what is left of an archive. Since we are also aware of some of the problems of the city, we can compare the past and the present by making use of the archive. This is a particularly important memory. For example, we had a program we shot with the elderly. People whose parents coincidentally participated in the program would call and ask us for the footage if they had lost their parents. That's how valuable the archive is for us. It is especially important for the news we do, for the news you can write, but I realized now that it was just as valuable for the audience, when people called and asked for it.

With these statements, ER TV emphasized that ER TV has a rich archive, which played an active role in both drawing attention to Malatya and contributing to the reconstruction of the city.

As understood from the statements of the participants, another crucial factor that shaped ER TV's memory of the 6 February earthquakes was the use of social media. The channel



has many social media accounts. With its 49,000 followers on Facebook, 15,000 followers on Instagram, and 14,900 subscribers on YouTube (B. A., personal interview, 25 May 2024), the channel started to use social media even more actively after the earthquake. The channel's Youtube account made specifically various earthquake-specific broadcasts. Under the name "*Disaster of the Century (Malatya)*" [*Asrın Felaketi (Malatya)*], a total of 113 programs with an average length of 30 minutes ran between 5 January 2024, and 25 June 2024. In each program, the reporters visited different neighbourhoods of Malatya, and the program showed the problems of the residents and the effects of the earthquake on screen. From October 16<sup>th</sup>, 2023, to 11 June 2024, there were a total of 86 programs with an average length of 50 minutes, titled "*After the earthquake - We are coming to you*" (*Depremden sonra - Size geliyoruz*) (ER TV, 2024c).

The content of this program was like "*Disaster of the Century (Malatya)*". The reporters visited different neighbourhoods in Malatya, and interviewed the residents and mukhtars, i.e. village heads or neighbourhood heads, which brought to the screen the problems that they experienced. B. A., who prepared and presented the program "*Disaster of the Century (Malatya)*", said the following:

The videos recorded on the channel's YouTube account summarize the period from the immediate aftermath of the earthquake until today. In fact, they write history. Our YouTube channel has a history, a flow. Anyone can use that footage whenever they want, we are in favour of the full use of these images. We want everyone to know what happened. History will write many things heavily with ER TV broadcasts. How human beings lost their moral values, ethical principles, how the mismanagement happened in the city, the people will write all of these in their memory one by one.

With these statements, this participant expresses that especially the YouTube account of the channel was an important source at the point of creating the memory of the earthquake.

From another viewpoint, according to Hoskins, television has come to be the new memory and works as an opinion leader on what to remember, when, and how (Hoskins, 2001: 341-344). Television's giving direction of memory constitutes a source of power for media organizations, especially in such extraordinary situations as earthquakes. E. K.'s explanations, who stated the following, are similar to Hoskins' assertions:

In our archive, there are records of the projects related to the Söğütlü Mosque, which is very much on the agenda today. We have what the General Director of Foundations said before, and what the current mayor said when he was a candidate. There is the project of the Söğütlü Mosque that emerged in the progressive process, and in the last project, the Söğütlü Mosque was to stand side by side with the Yeni Mosque. Later, they abandoned this project. I think that we have created a serious agenda on this issue. I think that the fact that Söğütlü Mosque is that strongly emphasized is also due to ER TV. Because we were the ones who broke that news in the first place. We carried the statement of the General Directorate of Foundations, and all the statements made at that time on the screen. Some things have a memory. It is necessary to preserve it even after natural disasters because those who leave that city and want to come back must find that memory as it was before. Obviously, we feel the responsibility for this. We are fighting

for the reconstruction of this city in accordance with its original, in accordance with its memory. To achieve this, I think we have a serious archive, and I think this archive has changed the agenda and even projects follow the information in them accordingly.

This participant stated that, just as Hoskins emphasized, they functioned as the opinion leaders and were successful in drawing the attention of the authorities to certain directions. In another statement, E. K. stated that they also directed the authorities to conduct demolitions as in the following:

The demolition process for damaged buildings continues. I think we have created a serious agenda in this regard. We have done serious work on the follow-up of the process, on the damage caused by demolitions to the environment, on asbestos. We conducted studies with doctors. What are the damages of this? What are the studies conducted in Malatya? I think that demolitions attracted attention after our news, and I think we changed the agenda on demolitions. We have done serious work on on-site separation and the inadequacy of the areas where they dump the rubble.

#### **4.4. Contribution of local media to crisis management after the earthquake**

After a disaster, one expects from media organizations delivery of the information that the public needs to manage the current crisis, focus of attention to the disaster-affected areas, and awareness raising on the disaster. In this context, the participants answered our questions about how ER TV managed the post-disaster crisis environment. The answers show that the television channel is highly active in informing the public and providing aid to those in need. H. K. said the following:

We are currently broadcasting without music. In the early days, we broadcasted for 78 hours without commercials, without interruptions, and we didn't intersperse normal movies or TV series. For months, we only shot footage from Malatya about the earthquake and made clips. B.A. was constantly in the field. After each broadcast, he was activating his social media. Those who sent shoes, clothes, financial support, food... Those who could not find containers, air conditioners, or stoves reached us and asked for help. For example, last winter, a woman in her twenties was staying in a tent with her 2-month-old baby and her husband in prison. The baby was small, there was no stove, nothing. As soon as I received information about such situations, we provided support.

With these words, this participant stated that the channel completely reorganized its content after the earthquake with a focus on the earthquake and that they worked like an aid organization for earthquake victims.

The word of E. K. also supports H. K. when pointing out that because of the news they made, they created awareness in the public for those in need as in the following words:

I think we provided a serious benefit, especially for the tradesmen. We made the voices of the tradesmen who needed containers and the tradesmen who were short of materials in the container heard. We saw that there were still people living in tents, for example. They specifically called us to make requests. One year after the earthquake, they said

that there was no one in tents, but we made a lot of news about people living in tents. Two or three days after our news, those people received containers. It was ten days ago that I made a news report. A sick person living in a container needed air conditioning. One of our viewers who lives in another city sent an air conditioner with its engine to ER TV for us to deliver it to the needy. After the points we criticized, we saw that the issue we criticized improved.

In another instance, E. K. stated that they closely followed the developments in the city after the earthquake, and thus they created an awareness among both the residents and the administrators of the city. This participant's words are the following:

We did serious work on on-site separation and the inadequacy of the areas where the workers dumped the rubble from the excavations. Concrete prices, for example, the increase in public order, theft incidents, and exorbitant prices in the city after the earthquake... You know, after the profoundly serious increases in everything from labour to concrete, when we went after this, local governments and municipalities opened concrete plants to sell concrete at a more affordable price. While making this news, we took concrete prices from neighbouring provinces that did not experience the earthquake and compared them with the concrete prices in Malatya. We made a price comparison for about 15 days. We compared the prices with those of before the earthquake. We also compared the prices in nearby provinces that are currently experiencing earthquakes. We compared the public order incidents and theft incidents there.

One of our participants, Ü. G. explained how, after the earthquake, they organized a program called "*We Are Coming to You (Size Geliyoruz)*" and went to a neighbourhood of Malatya every day, toured the area accompanied by the neighbourhood headman, and talked to the local people and tradesmen about their problems and demands. Ü. G. added that they solved a high number of grievances of the citizens thanks to this program and added the following:

In the past weeks, there were great grievances in the area where İkiçze TOKİ residences are located. Citizens called us because there was no bread buffet, no market, no health centre, and only a few bus services. Of course, we went and reported these as news, and the next day, there was a bread buffet there. The public made a request for a school on our channel. Following our news, the Director of National Education went there and started a field survey for a school.

#### **4.5. Changing broadcasting policy after the earthquake**

In times of disasters, the media contributes to the formation of a memory of the disaster. In fact, this memory is also a source of reference for future disasters and provides the opportunity to gain wisdom from what happened. In this context, the archives of the news and programs made by the media organization during the disaster period are highly valuable. As we can understand from the statements of the participants, the most prominent policy of ER TV during the disaster period was not to leave the questions of the public unanswered. H. K. emphasizes that they worked to inform the public after the earthquake and that this information took a serious place in their archives:

We continue to make programs entirely on the earthquake. We still can't do normal programs, because people are constantly asking, they are hungry for information. I receive more than a hundred messages every day. People don't ask their questions to AFAD, they don't ask to the Environment and Urbanization, and they ask me when they can't reach the relevant units. We continued to broadcast earthquakes for three hours every day without interruption. This is also a social responsibility project. In fact, we are also doing a public service. We constantly talk about on-site transformation, and reserve area projects, what about Çırmıktı? What about Yeşilyurt? What about Doğanşehir? What will happen to the roads? What will happen to the people? Will they cut the rent subsidies? When will they draw the housing raffle? The man opposite is dictating a message to his grandson. I cannot stand up to such a man and say, I will talk about sports today. It is not possible to remain insensitive.

### **Conclusion**

In extraordinary times, knowledge of the past is necessary to make sense of what happened. In fact, knowledge of the past is like a road map for today, from which the meaning of membership will emerge. Mastering the knowledge of the past is one of the safest ways to deal with today's chaos. Media institutions are important memory spaces that archive the information of this biological history of both visually and aurally. The bitter experience with the 6 February earthquakes necessitates thinking about the impact of the media on setting the agenda, informing, and providing opinion advice. Media organizations were the primary sources of news in the earthquakes which affected eleven provinces. Immediately after the earthquakes, it was possible to receive a good amount of reliable data from national media channels about the epicentres of the earthquakes, their magnitudes, and the loss of lives and properties. However, the effects of earthquakes had meanings far beyond numbers throughout the country. At this point, the information obtained from local media organisations of the cities affected by the earthquake is invaluable. As seen in the ethnographic interviews conducted within the scope of the study, local media can look at events from the inside compared to the national media which can look at events from the outside. Many of the local media workers were also earthquake victims and seeing the destruction of the cities where they lived and, for some, where they were born and raised, caused people to strive to convey what was right, to make the voice of the city heard, and to help the public. As seen in ER TV, beyond being a television channel, they also worked like a charity organization in the post-earthquake period.

In extraordinary times, reporting accurate information from the field is especially important. In this context, ER TV's unique knowledge of the city helped to reflect the real extent of destruction and loss on the screen. This was the main point that the participants pointed out about the difference between local and national television channels. Knowledge well of the city also enabled the channel to travel the city street by street and convey current developments through its social media accounts. The broadcasts made by ER TV specifically about Malatya after the earthquake show the feature of being notes on the history of the province of Malatya following the 6 February earthquakes. In this context, the channel's archive is the digital memory

of the city. The memory in question requires learning from what happened, not forgetting it, and taking precautions against what is likely to happen. As seen in ER TV, the city's own local media follows the post-disaster events of the city more closely. The recommendation of this study is to conduct academic studies on local media outlets in other cities affected by earthquakes. Thus, it seems possible to take a closer look at the reality of earthquakes and take more detailed precautions regarding probable future earthquakes.

## Notes

- 1 This term is used as “watchdog” in the study (Houston et al., 2019, p. 607). It is thought that it would be more appropriate to understand disaster communication as a follower of the process.
- 2 In this regard, the publication of the May 2023 issue of TRT Akademi magazine (Volume 08, Issue 18) with the theme of “Disaster Management and Media” and the subsequent publication of studies covering the subjects of “disaster and media”, “disaster communication” and “disaster journalism” will contribute to the development of communication research. This shows that studies in this direction are increasing.
- 3 The chart in question is the most up-to-date chart published by the Malatya Governorship with the same name.

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## References

- AFAD (11 May 2024). Afet ve Acil Durum Yönetimi Başkanlığı Web Sitesi, <https://www.afad.gov.tr/aciklamali-afet-yonetimi-terimleri-sozlugu>.
- AFAD (2023). 06 Şubat 2023 Pazarcık-Elbistan Kahramanmaraş (Mw: 7.7 – Mw: 7.6) Depremleri Raporu. [https://deprem.afad.gov.tr/assets/pdf/Kahramanmara%C5%9F%20Depremi%20%20Raporu\\_02.06.2023.pdf](https://deprem.afad.gov.tr/assets/pdf/Kahramanmara%C5%9F%20Depremi%20%20Raporu_02.06.2023.pdf).
- Antunes, M. N., da Silva Pereira, S., Zêzere, J. L., & Oliveira, A. E. (2022). Disaster journalism in print media: analysis of the top 10 hydrogeomorphological disaster events in Portugal, 1865–2015. *International Journal of Disaster Risk Science*, 13(4), 521-535.
- Assmann, J. (2015). *Kültürel bellek*. (Tekin, A. Trans.) Ayrıntı.
- Ata, F. (2023). Afet haberciliği: Kahramanmaraş merkezli depremler sürecinde sosyal medyaya yönelik bir değerlendirme. *TRT Akademi*, 8(18), 606-629.

- Balamir, F. (2023). Bir nitel yaklaşım deseni olarak etnografi. *Toplum Bilimleri Dergisi*, 17(34), 38-53.
- Budak, E. (2023). Türk medyasının depremle imtihanı: Kahramanmaraş depremini afet haberciliği üzerinden değerlendirmek. *Gümüşhane Üniversitesi İletişim Fakültesi Elektronik Dergisi*, 11(2), 1087-1113.
- Canniford, R. (2005). Moving shadows: suggestions for ethnography in globalised cultures. *Qualitative Market Research: An International Journal*, 8(2), 204 – 218.
- David, E. (2008). Cultural trauma, memory, and gendered collective action: The case of women of the storm following Hurricane Katrina. *NWSA Journal* 20(3), 138-162.
- Demir, S. T. (2023). Afet medyası ve medya afeti. *TRT Akademi*, 8(18), 709-716.
- Dufty, N. (2020). Disaster education, communication and engagement. Wiley Blackwell.
- ER TV (15 June 2024a). ER TV website. <https://www.ertv.com.tr/>.
- ER TV (1 February 2024b). ER TV'den reyting rekoru! <https://www.ertv.com.tr/malatya/ertvden-reyting-rekoru-h16109.html>.
- ER TV (25 June 2024c). ER TV Youtube channel. <https://www.youtube.com/@ERTVcomtr>.
- Gross, T. (2002). Anthropology of collective memory: Estonian national awakening revisited. *Trames* 4(6)3, 42-354.
- Habertürk (18 March 2023). Depremde kaç konut hasar aldı? <https://www.haberturk.com/depremdede-kac-konut-hasar-aldi-3574509ekonomi#:~:text=EN%20%C3%87OK%20ZARAR%20G%C3%96REN%20%C4%B0LLER,50.8'inde%20hasar%20tespit%20edildi>.
- Hoskins, A. (2001). New memory: mediating history, *Historical Journal of Film, Radio and Television*, 21(4), 333-346. DOI: 10.1080/01439680120075473
- Houston, J. B., Schraedley, M. K., Worley, M. E., Reed, K., & Saidi, J. (2019). Disaster journalism: Fostering citizen and community disaster mitigation, preparedness, response, recovery, and resilience across the disaster cycle. *Disasters*, 43(3), 591-611.
- Huyssen, A. (1999). *Alacakaranlık anıları: Bellek yitimi kültüründe zamanı belirlemek*. (Atakay, K. Trans.) Metis.
- Landsberg, A. (2004). *Prosthetic memory*. Columbia University.
- Governorship of Malatya(2023). 8 May 2023 Deprem Durum Çizelgesi.<http://www.malatya.gov.tr/08052023-deprem-durum-cizelgesi>.
- Matthews, J. and Thorsen, E. (2022). Theorising disaster communities: Global dimensions and their local contexts, *The Journal of International Communication*, 28:2, 228-248, DOI: 10.1080/13216597.2022.2098164
- Mavi, E., E. (2020). Afet kriz yönetiminde sosyal medya: 30 Ekim 2020 İzmir depremi. *Karadeniz İletişim Araştırmaları Dergisi*, 10(2), 31-53.
- Nora, P. (2006). *Hafıza mekânları* (M. E. Özcan, Trans.) Dost.
- Ostertag, S. F. (2023). *Connecting after chaos. Social media and the extended aftermath of disaster*. New York University Press.
- Sevgi, M. A. (2024). Veri toplama tekniği olarak mülakat: Etnografik bir değerlendirme. *International Journal of Eurasia Social Sciences (IJOESS)*, 15(57), 1132-1147.
- Sözen, E. (1997). *Medyatik hafıza*. Timaş.
- Şahin, D., Zengin Demirbilek, E. (2023). Doğal afet ve kriz yönetiminde sosyal medyanın etkisi: Kahramanmaraş merkezli deprem felaketi üzerine bir inceleme. *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 51, 322-333. <https://doi.org/10.52642/susbed.1289335>



- Toker, H. (2016). Doğal afetler, iletişim ve medya. In Toprak Karaman, Z. & Altay, A. (Eds.) *Bütünleşik afet yönetimi. İlkem*, pp. 249-277.
- TRT Akademi (31 May 2023). Afet Yönetimi ve Medya. 8(18). <https://dergipark.org.tr/tr/pub/trta/issue/77677>
- TRT Haber (24 June 2024). 6 Şubat depremlerinde 53 bin 537 canımızı yitirdik. <https://www.trthaber.com/haber/gundem/6-subat-depremlerinde-53-bin-537-canimizi-yitirdik-833953.html>.
- Van Dijck, J. (2008). Mediated memories: A snapshot of remembered experiences In J. Kooijman, P. Pisters and W. Strauven (Ed.) *Mind The Screen: Media Concepts According to Thomas Elsaesser* (pp. 72–75). Amsterdam University.
- Zelizer, B. (2008). Journalism's memory work. In A. Erll and A. Nünning (Eds.) *Cultural memory studies: An international and interdisciplinary handbook*. De Gruyter, pp. 379-388.

### Source contacts

- KK.1: B. A., 44, program manager, interview date and place: 25 May 2024/Malatya.
- KK.2: H. K., 51, program producer/presenter, interview date and place: 28 May 2024/Malatya.
- KK.3: E. K., 35, news director, interview date and place: 2 June 2024/Malatya.
- KK.4: Ü.G., 32, program producer/presenter, interview date and place: 25 September 2024/ Malatya.



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*Araştırma makalesi/Research article*

# The Effects of Spiritual Well-Being and Coping Skills of the Kahramanmaraş Earthquake Survivors on Trauma

Kahramanmaraş Depremzedelerinin Spiritüel İyi Oluş ve Başa Çıkma Becerilerinin Travma Düzeyleri Üzerine Etkileri

**Cihan Sucu\***  
**Bengü Berkmen\*\***

## Abstract

The Kahramanmaraş earthquake, which occurred on 6 February 2023 caused traumatic effects on several people due to its magnitude, the width of the area it impacted and the degree of destruction it caused. In addition to studies investigating trauma symptoms in Kahramanmaraş earthquake survivors, no study on spiritual well-being has been published yet. The main purpose of this study is to examine the effects of earthquake survivors' spiritual well-being levels and coping skills on posttraumatic stress disorder (PTSD) symptoms. The research was conducted based on the relational survey model. The population of the study consists of students who

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were affected by the earthquake and who currently study in KKTC. The study used a convenience sampling method with 400 participants aged 18 and over. Data collection tools included a Personal Information Form, the Spiritual Well-Being Scale, the Coping Attitudes Assessment, and the Post Traumatic Stress Disorder Short Scale. The results show a positive and significant relationship between spiritual well-being and coping attitudes, indicating that coping attitudes increase with higher levels of spiritual well-being. Additionally, a positive relationship was found between spiritual well-being and PTSD symptoms. Women reported higher self-help scores, while men exhibited higher avoidance scores. The study also revealed with those experiencing loss reporting higher PTSD levels. that the participants' own injury status did not have a significant relationship with their PTSD levels. Therefore, it is recommended to develop programs to enhance the spiritual well-being of earthquake survivors. Steps can be taken to increase the level of spiritual well-being to strengthen coping skills.

**Keywords:** *Kahramanmaraş earthquake, spiritual well-being, coping, posttraumatic stress*

## Öz

Travmatik olaylar, bireyi etkileyen, süregelen yaşamın dışında kalan, kişinin olaylarla başa çıkma yeteneğini aşan ve kişide yoğun stres kaynağı yaratan olaylardır. 6 Şubat Kahramanmaraş depremi de sarsıntının şiddeti ve yol açtığı yıkım nedeniyle birçok kişide travmatik etkiye neden olmuştur. Depremzedelere yönelik travma belirtilerini araştıran çalışmaların yanında, spiritüel iyi oluş konusunda henüz bir çalışma yayınlanmamıştır. Bu çalışmanın temel amacı, depremzedelerin spiritüel iyi oluş düzeyleri ile baş etme becerilerinin travma sonrası stres bozukluğu belirtileri üzerindeki etkilerini araştırmaktır. Araştırma, ilişkisel tarama modeli esas alınarak gerçekleştirilmiştir. Araştırmanın evreni, 6 Şubat 2023 tarihinde meydana gelen depremi Kahramanmaraş, Adıyaman, Hatay, Gaziantep, Malatya, Kilis, Diyarbakır, Şanlıurfa, Elazığ, Adana, Osmaniye, Kayseri, Niğde, Bingöl, Tunceli, Batman ve Mardin illerinde yaşamış olan, depremden etkilenmiş ve şu an Kuzey Kıbrıs Türk Cumhuriyeti'nde ikamet eden ve öğrenim gören öğrencilerden oluşmaktadır. Araştırmanın örneklemi ise 18 yaş ve üzeri 400 bireyin uygun örnekleme yöntemiyle seçilmesiyle oluşturulmuştur. Veri toplama araçları olarak Kişisel Bilgi Formu, Spiritüel İyi Oluş Ölçeği, Başa Çıkma Tutumlarını Değerlendirme ve Travma Sonrası Stres Bozukluğu Kısa Ölçeği kullanılmıştır. Sonuçlar, manevi iyi oluş ile başa çıkma tutumları arasında pozitif ve anlamlı bir ilişki olduğunu göstermekte, manevi iyi oluş düzeyi arttıkça başa çıkma tutumlarının da arttığını ortaya koymaktadır. Ayrıca, manevi iyi oluş ile TSSB semptomları arasında pozitif bir ilişki bulunmuştur. Kadınlar daha yüksek kendine yardım puanları bildirirken, erkekler daha yüksek kaçınma puanları sergilemiştir. Çalışma aynı zamanda kayıp yaşayanların daha yüksek TSSB seviyeleri bildirdiğini ortaya koymuştur. Katılımcıların kendi yaralanma durumlarının TSSB seviyeleri ile anlamlı bir ilişkisi bulunmamıştır. Bu nedenle, depremzedelerin spiritüel iyi oluşunu artırmaya yönelik programların geliştirilmesi önerilmektedir. Spiritüel iyi oluşun, bireylerin travma sonrası strese başa çıkma yet-

eneklerini güçlendirdiği göz önünde bulundurularak, meditasyon, mindfulness ve manevi danışmanlık gibi uygulamaların önerilmesi uygun olacaktır.

**Anahtar sözcükler:** Kahramanmaraş depremi, spiritüel iyi oluş, baş etme, travma sonrası stres

## Introduction

Traumatic incidents are events which occur outside of daily life and they profoundly affect individuals by overwhelming their coping abilities. These events often lead to intense stress (Dai et al., 2016). Examples include natural disasters, personal attacks, rapes, wars, or witnessing the death of a loved one (Hong & Efferth, 2016). The American Psychiatric Association (APA, 2022) categorises trauma into three main types in *The Diagnostic and Statistical Manual of Mental Disorders* (DSM-5): intentional harm (war, terrorism, rape), unintentional harm (accidents, fires), and natural disasters (earthquakes, floods, etc...). For an event to be traumatic, it must threaten a person's life, his or her physical or mental integrity, and their worldview (Farooqui et al., 2017). This threat can undermine feelings of safety and self-worth, and challenge beliefs about the world and others (Levine, 2015). Consequently, post-traumatic stress disorder (PTSD) can arise, marked by intense emotions and psychological distress following a significant life event (Özgen & Aydın, 1999). Trauma experiences are common (Galea et al., 2005).

The Disaster and Emergency Management Authority (Afet ve Acil Durum Yönetimi Başkanlığı-AFAD) reported two earthquakes of magnitudes 7.7 and 7.6 that occurred in Kahramanmaraş on 6 February 2023 (2023). According to this information, they affected many provinces of Türkiye, including Adıyaman, Hatay, Gaziantep, and others, over an area of 108,812 km<sup>2</sup>. These events led to additional provinces being declared disaster areas. As a result, residents in this region may have developed PTSD symptoms, which can persist over time. Symptoms of PTSD can include re-experiencing traumatic events and hyperarousal (Hacıoğlu et al., 2002). The severity and frequency of these symptoms can vary based on individuals' coping skills (Feder et al., 2013). This study may assist clinicians in creating effective interventions for PTSD. Understanding the impact of spiritual well-being and coping skills on PTSD symptoms can help tailor therapeutic approaches to meet individual needs. In clinical practice, it is crucial to develop strategies that support coping with trauma through spiritual resources.

One of the important factors affecting the level of stress is how individuals perceive and cope with events. Coping is defined as managing and controlling stressors (Wresniewski & Chylinska, 2007). How people interpret the situations they encounter and how they react to these situations can cause stress to decrease or increase (Demirtaş, 2007). Dressler (1985) described it as cognitive and behavioural effort to mitigate stress. The intense stressors arising from experiences such as loss of property and/or loved ones, collapse, loss of a limb, or fear of not surviving emphasise the importance of effective coping strategies. Individual coping skills can vary due to personal differences in event evaluation. One person may experience negative emotions in response to a traumatic event, while another may not (Cüceloğlu, 1998). Social support, financial stability, and quality leisure time can enhance coping, while loneliness and fear of ostracism can hinder it (Baltaş & Baltaş, 2000).

Coping styles fall into two categories: emotion-focused and problem-focused. Emotion-focused coping aims to change emotional perceptions, while problem-focused coping seeks to address the source of stress (Brandtstädter & Renner, 1990). Further classifications include self-confident, optimistic, helpless, submissive, and social support-seeking approaches (Duru & Gültekin, 2021). The self-confident approach involves logical problem-solving, while the optimistic approach maintains a calm and realistic perspective. The helpless approach relies on supernatural support, and the submissive approach avoids problem-solving efforts. Seeking social support involves sharing problems with others (Bozdağ, 2015). The choice of coping approaches can impact overall well-being (Mayordomo, 2021). It can be said that an individual's belief in supernatural support, in other words spirituality, after natural disasters is an important factor in making sense of the event and coping with it.

Although often 'spiritualism' is perceived in relation to religion, it is a concept that has a much wider scope since the early periods of human history. In addition, scientific research in this field has accelerated in the last 150 years (Suri & Rao, 2014). Turan (2013) notes that religious diversity and new movements indicate that religion remains influential in society. Despite the limited literature on spiritualism in Türkiye, interest in spiritual movements has intensified (Cengiz et al., 2021). Since the late twentieth century, well-being has gained traction in behavioural sciences and psychology. Although widely studied, the concept remains partially defined and varies across contexts (Karataşoğlu, 2019). In positive psychology, well-being focuses on enhancing mental health and understanding personality traits (Fredrickson, 2001). It encompasses subfields like subjective well-being (Çağış, 2013), psychological well-being (Gönültaş & Karataş, 2023), and ontological well-being (Tunç, 2021). This study specifically addresses spiritual well-being, defined as living a spiritually healthy and fulfilling life (Gencer et al., 2021). Generally, spiritual well-being emphasises self-discovery, inner peace, and positive emotions like gratitude and forgiveness (Kaplan & Beydağ, 2023). It can involve practices like meditation, prayer, and yoga (Yılmaz, 2019) and include self-improvement activities. A crucial aspect of spiritual well-being is confronting life's profound questions, such as those regarding death and purpose (Nurkan, 2020). In the literature of other countries, there are studies that have investigated the effects of spiritual well-being on individuals' ability to cope with traumatic situations (Ramadan, Kheirallah, Saleh, Bellizzi, & Shorman, 2022; Slater, Bordenave & Boyer, 2015; Wortmann, Park, and Edmondson, 2011). In the Turkish literature, spiritualism is a subject that has been analysed from different perspectives in Türkiye's history, which has been home to many different religions and beliefs (Cengiz, Küçükural & Gür, 2021). However, it is seen that these studies are generally within the framework of faith, secularism, liberalism, and beliefs in nature. It has started to be researched together with the field of psychology in the last 20 years. When the studies in Türkiye were analysed, it was seen that some studies addressed different issues such as depression (Kutlu & Demir, 2022), narcissism (Kardaş, 2017), and psychological resilience (Ekşi Boyalı & Ümmet, 2019) with spirituality. According to a study that highlights the relationship between spirituality and trauma, researchers found out that individuals with high levels of spirituality had higher post-traumatic growth (Uğurluoğlu & Erdem, 2019).

After the 6 February 2023 earthquake, although research on trauma has started (Akay, Oğuzhan & Güdücü Tüfekçi, 2024; Karabacak Çelik, 2023), there is no study on specific spiritual well-being. For this reason, it is thought that this study will provide important information about how earthquake victims make sense of the traumatic event they experienced. For individuals with PTSD, achieving inner peace can be challenging. However, spiritual practices may help alleviate symptoms. For instance, meditation and prayer can reduce stress (Mikaelli & Eyni, 2022). Spiritual beliefs can foster feelings of forgiveness and gratitude, enabling healthier responses to stress (Kim & Kim, 2019). Overall, there may be a significant relationship between spiritual well-being, PTSD, and coping styles among earthquake survivors, which this study aims to explore. The increase in tendencies and behaviours towards spiritualism and religious beliefs in Türkiye in the last two decades made us think about the perspectives of the Kahramanmaraş earthquake survivors on this issue. Therefore, this study aims to investigate how spiritual well-being and coping skills of earthquake survivors affect PTSD symptoms. The relationship between the mentioned variables and their prediction levels will also be analysed in the study.

### 1. Methodology and research model

This study is based on the relational survey model. The relational research model is a research method frequently used in social sciences. This model is used to explain the relationships between many variables and focuses on examining the nature, direction, and strength of these relationships (Babbie, 2016).

**Table 1:** *Distribution of Participants According to Demographic Characteristics*

		n	%
Gender	Man	189	47,3
	Woman	211	52,8
Marital Status	Single	282	7,5
	Married	118	29,5
Education Level	High school or below	80	2,0
	University	231	57,8
	Postgraduate	89	22,3
Being a victim of the earthquake before 6 February 2023	Yes	132	33,0
	No	268	67,0
Got injured in the earthquake?	Yes	108	27,0
	No	292	73,0
The death of a relative in the earthquake	Yes	215	53,8
	No	185	46,3
Losing home in the earthquake	Yes	109	27,3
	No	291	72,8



## 2. Data Collection Tools

The study used a variety of data collection tools, including demographic information form, Spiritual Well Being Scale and Posttraumatic Stress Disorder Symptoms Scale - Self-Assessment (PTSD-SS-SS).

The demographic information form used in the study includes questions on participants' gender, age, education level, the city where they experienced the earthquake, and the situations they encountered as a result of the earthquake. Second, we used the Spiritual Well-Being Scale created by Ekşi and Kardaş (2017), is a 5-point Likert scale comprising 29 items. The scale assesses individuals' personal, transcendental, environmental, and social aspects, with three sub-dimensions: Harmony with nature (e.g. I feel that nature should be respected), anomie (e.g. I feel a sense of dissatisfaction with life), and transcendence (e.g. Being connected to a spiritual power gives me confidence). The scale's Cronbach Alpha internal consistency was .89, indicating reliability and validity. In this study, the Cronbach Alpha value was found to be .88. A high score in each sub-dimension indicates that the individual has the characteristic evaluated by the relevant sub--dimension. The scale also gives a total well-being score.

Third, the study relied on coping attitudes assessment scale Developed by Carver et al. (1989) and revised by Zuckerman and Gagne (2003), 4-point Likert scale contains 40 items across five factors which are self-help (e.g. I take time to express my feelings), approach (e.g. I concentrate with all my strength on what I am doing), adaptation (e.g. I try to be optimistic in every situation), abstention-avoidance (e.g. I pretend that the situation that has arisen does not really happen), self-punishment (e.g. I am constantly preoccupied with what is troubling me). The scale was adapted into Turkish by Dicle and Erşanlı (2015), resulting in 32 items and five factors. The Cronbach Alpha for this version was .97. In this study, the Cronbach Alpha value was calculated as .83. The highest score that can be obtained from the scale is 160 and the lowest score is 40. A higher score on the scale means that the person has a stronger coping attitude.

Last, we used post-traumatic stress disorder symptoms scale - self-assessment (ptsd-ss-ss), The PTSD-SS-SS, developed by Foa et al. (1997) and adapted into Turkish by Aydın et al., consists of 17 items scored from 0 to 3. The scale is a self-assessment scale that aims to screen for symptoms of posttraumatic stress disorder. The scale has 3 sub-scales which are Avoidance (e.g. inability to remember an important part of the traumatic incident), live over (e.g. having bad dreams about the traumatic event), overexcitation (e.g. difficulty falling asleep or staying asleep). The overall internal consistency score is .90, with subscale values ranging from .72 to .82. The reliability and validity of the Turkish adaptation were deemed sufficient (Aydın et al., 2012). In this study, the Cronbach Alpha value was calculated as .89. Scores of 13 or higher indicate the possibility of PTSD.

### 3. Research procedure

As the first step of the research, the ethics committee permission dated 31.01.2024 and numbered EKK23-24/005/07 was obtained by the Scientific Research and Publication Ethics Committee of Cyprus International University and the data were collected between March 2024 and April 2024. University students who experienced the 6 February Kahramanmaraş earthquake zone were included in the study. Since we planned to compare participants' previous exposure of natural disasters, those with a background of natural disasters were not excluded from the study. Prior to the research, we shared a consent form with the participants underlining that raking part in the research was voluntary and informed the participants. The data collection process, which developed in face-to-face interviews, lasted 15-20 minutes.

### 4. Data analysis and results

Data analysis was conducted using SPSS 26.0. Statistical measures such as mean, frequency, standard deviation, and minimum-maximum values were calculated. Before analysis, the normality of the score distributions for the Spiritual Well-Being Scale, Coping Attitudes Scale, and PTSD Scale was tested. The kurtosis and skewness ratios for all variables fell between -2.5 and +2.5, indicating normal distribution (Field, 2018). Consequently, parametric test methods were employed for data analysis.

The main purpose of this study was to investigate the effects of earthquake survivors' spiritual well-being levels and coping skills on posttraumatic stress disorder symptoms. For this purpose, statistical analysis methods such as independent t-test and ANOVA were used to compare the participants' scores on the Spiritual Well-Being Scale, Coping Attitudes Scale and Posttraumatic Stress Disorder Scale according to sociodemographic variables.

The analysis of scores from the Spiritual Well-Being Scale and Coping Attitudes Scale, comparing results by gender using independent samples t-tests (Table 2). Participants' total scores on the Spiritual Well-Being Scale ( $t = -.494$ ;  $p > .05$ ) and its subscales—transcendence ( $t = -.542$ ;  $p > .05$ ), harmony with nature ( $t = -.178$ ;  $p > .05$ ), and anomie ( $t = .009$ ;  $p > .05$ )—did not show significant differences by gender. However, the self-help ( $t = -2.487$ ;  $p < .05$ ) and avoidance ( $t = 2.238$ ;  $p < .05$ ) subscale scores of the Coping Attitudes Scale differed significantly. Women reported higher self-help scores than men, while men had higher avoidance scores. The total scores for the Coping Attitudes Scale and the approach, adaptation, and self-punishment sub-dimension scores did not differ significantly by gender.

**Table 2:** Comparison of Spiritual Well-Being Scale and Coping Attitudes Scale Scores by Gender

Variables	Gender	n	M	SD	t	p
Transcendence Sub-Dimension	Man	189	54,85	14.295	-.542	.588
	Woman	211	55,55	11.42		
Harmony With Nature Sub-Dimension	Man	189	29,21	4.23	-.178	.858
	Woman	211	29,28	3.919		
Anomie Sub-Dimension	Man	189	19,9	5.334	-.009	.992
	Woman	211	19,91	5.578		
<b>Spiritual Well-Being Scale</b>	Man	189	103,96	16.863	-.494	.622
	Woman	211	104,74	14.574		
Self-Help Sub-Dimension	Male	189	14,78	3.739	-2,487	.013*
	Woman	211	15,73	3.891		
Approach Sub-Dimension	Male	189	21,04	3.627	.646	.519
	Woman	211	2,79	3.945		
Adaptation Sub-Dimension	Male	189	19,53	3.603	1,116	.265
	Woman	211	19,11	3.816		
Avoidance Subscale	Male	189	12,59	3.723	2,238	.026*
	Woman	211	11,76	3.675		
Self-Punishment Subscale	Male	189	14,57	4.41	-.452	.651
	Woman	211	14,76	4.084		
<b>Coping Attitudes Scale</b>	Male	189	82,5	11.716	.306	.760
	Woman	211	82,16	1.912		

\* $p < .05$

Table 3 shows the details of the independent samples t-test results for the comparison of Posttraumatic Stress Disorder Scale scores according to the status of losing a relative in the earthquake. We determined that there was a significant difference in the scores of the Posttraumatic Stress Disorder Scale between the participants who had lost a relative in the earthquake and the participants who had not ( $t=5.360$ ;  $p<.05$ ). Accordingly, participants who had lost a relative in the earthquake had higher PTSD scores than those who had not. In addition, we analysed the relationship between the PTSD levels of the participants and their injuries during the earthquake. As a result of the analysis, no statistically significant relationship was found.

**Table 3:** Comparison of Posttraumatic Stress Disorder Scores According to the Loss of a Relative in the Earthquake

Variables		n	M	SD	t	p
Losing Someone in the Earthquake	Yes	215	23,56	1,253	5,360	.000*
	No	185	18,41	8,724		
Get Injured	Yes	108	23,58	10,332	2,996	.067
	No	292	20,28	9,603		

\* $p < .05$ , \*\* $p < .01$

The Table 4 displays the Pearson correlation coefficients examining the relationships between the participants’ scores on the Spiritual Well-Being Scale, Coping Attitudes Scale, and Posttraumatic Stress Disorder (PTSD) Scale. There is a significant positive correlation between total scores on the Spiritual Well-Being Scale and the Coping Attitudes Scale ( $r = .397$ ;  $p < .01$ ), as well as with the self-help ( $r = .194$ ;  $p < .01$ ), approach ( $r = .299$ ;  $p < .01$ ), adaptation ( $r = .357$ ;  $p < .01$ ), avoidance ( $r = .213$ ;  $p < .01$ ), and self-punishment ( $r = .113$ ;  $p < .05$ ) subscales. This indicates that higher spiritual well-being scores are associated with higher coping attitudes scores.

**Table 4:** Relationships between Spiritual Well-Being Scale, Coping Attitudes Scale and Posttraumatic Stress Disorder Scale Scores

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Transcendence Sub-Dimension	r	1									
	p										
2. Harmony With Nature Sub- Dimension	r	,421**	1								
	p	.000									
3. Anomie Sub-Dimension	r	-.043	-.075	1							
	p	.395	.133								
4. Spiritual Well-Being Scale	r	,913**	,577**	,294**	1						
	p	.000	.000	.000							
5. Self-Help Sub-Dimension	r	,189**	,315**	-.122*	,194**	1					
	p	.000	.000	.014	.000						
6. Approach Sub-Dimension	r	,285**	,404**	-.113*	,299**	,313**	1				
	p	.000	.000	.024	.000	.000					
7. Adaptation Sub-Dimension	r	,328**	,402**	-.045	,357**	,373**	,583**	1			
	p	.000	.000	.368	.000	.000	.000				
8. Avoidence Sub- Dimension	r	,120*	.001	,330**	,213**	,124*	-.052	,169**	1		
	p	.016	.987	.000	.000	.013	.303	.001			
9. Self-Punishment Sub-Dimension	r	-.021	-.02	,391**	,113*	.036	-.08	-.015	,365**	1	

	p	.669	.696	.000	.023	.479	.112	.761	.000			
10. Coping Attitudes Scale	r	.299**	.369**	.161**	.397**	.623**	.588**	.702**	.547**	.476**	1	
	p	.000	.000	.001	.000	.000	.000	.000	.000	.000		
11. Posttraumatic Stress Disorder Scale	r	-.037	.054	.379**	.115*	.069	-.02	.04	.256**	.330**	.238**	1
	p	.457	.286	.000	.021	.17	.696	.425	.000	.000	.000	

\* $p < .05$ ; \*\* $p < .001$

When we examine the sub-dimensions reveals significant correlations between the transcendence sub-dimension of spiritual well-being and the self-help ( $r = .189$ ;  $p < .01$ ), approach ( $r = .285$ ;  $p < .01$ ), adaptation ( $r = .328$ ;  $p < .01$ ), and avoidance ( $r = .120$ ;  $p < .05$ ) subscales of coping attitudes. Additionally, there are strong positive correlations between the harmony with nature sub-dimension and the self-help ( $r = .315$ ;  $p < .01$ ), approach ( $r = .404$ ;  $p < .01$ ), and adaptation ( $r = .402$ ;  $p < .01$ ) scores. Conversely, the anomie sub-dimension has negative correlations with self-help ( $r = -.122$ ;  $p < .05$ ) and approach ( $r = -.113$ ;  $p < .05$ ), and positive correlations with avoidance ( $r = .330$ ;  $p < .01$ ) and self-punishment ( $r = .391$ ;  $p < .01$ ). As anomie scores increase, self-help and approach scores decrease, while avoidance and self-punishment scores increase.

A positive correlation exists between the total scores of the Spiritual Well-Being Scale and the PTSD Scale scores ( $r = .115$ ;  $p < .05$ ). However, there are no statistically significant correlations between PTSD and the transcendence ( $r = -.037$ ;  $p > .05$ ) and harmony with nature ( $r = .054$ ;  $p > .05$ ) subscale scores. In contrast, there is a significant positive correlation between anomie subscale scores and PTSD scores ( $r = .379$ ;  $p < .01$ ), indicating that higher anomie scores are associated with higher PTSD scores.

Last, a positive relationship is found between total scores on the Coping Attitudes Scale and PTSD scores ( $r = .238$ ;  $p < .01$ ). No significant correlations were observed between PTSD scores and the self-help ( $r = .069$ ;  $p > .05$ ), approach ( $r = -.02$ ;  $p > .05$ ), and adaptation ( $r = .04$ ;  $p > .05$ ) subscales. However, significant positive correlations exist between PTSD scores and the avoidance ( $r = .256$ ;  $p < .01$ ) and self-punishment ( $r = .330$ ;  $p < .01$ ) subscales. This suggests that as avoidance and self-punishment coping scores increase, PTSD scores also rise.

**Table 5:** Predictive Effect of Spiritual Well-Being Scale and Coping Attitudes Scale Scores on Posttraumatic Stress Disorder Scale Scores

Variable	B	Sh	$\beta$	t	p
(Fixed)	3,063	4,066		.753	.452
Spiritual Well-Being Scale	.015	.034	.024	.461	.645
Coping Attitudes Scale	.200	.047	.228	4,302	.000*
R=.239	R <sup>2</sup> =.057		F(2;399)=12,047		P<.01

Dependent Variable: PTSD Scale

Table 5 shows the statistical results of the regression analysis evaluating the predictive power of the Spiritual Well-Being and Coping Attitudes Scales on the Posttraumatic Stress Disorder (PTSD) Scale scores. Spiritual Well-Being Scale scores did not predict PTSD Scale scores in a statistically significant way ( $\beta = .015$ ;  $p > .05$ ). Coping Attitudes Scale scores positively predicted PTSD Scale scores ( $\beta = .200$ ;  $p < .01$ ). 5.7% of the change in the PTSD Scale scores of the participants is explained by the Spiritual Well-Being Scale and Coping Attitudes Scale scores.

## 5. Discussion

This study examined the effects of spiritual well-being and coping skills on PTSD symptoms among earthquake survivors, contextualizing the results within existing literature. We found that levels of spiritual well-being, including its sub-dimensions of transcendence, harmony with nature, and anomie, did not significantly differ by gender. This aligns with research by Gomez and Fisher, who also found no gender differences in spiritual well-being, and Rapson and John (2005), who reported balanced levels between genders. However, Yılmaz (2019) diverged from this trend, revealing that woman participants exhibited higher spiritual well-being than men. Other studies, such as those by Soysa and Wilcomb (2015) and Göçen (2019), indicated that women tend to have better psychological health than men. The variability in findings may be attributed to factors such as geographical location, cultural dynamics, and societal value systems.

We found a notable difference in gender with regard to the self-help and avoidance sub-dimensions of coping attitudes. Women reported higher self-help scores, while men exhibited higher avoidance scores. This reflects literature suggesting that women generally employ more positive coping strategies (Ai et al., 2003; Özcan, 2019). Studies conducted on 6 February earthquake among university students, it was found that stress levels of women were higher. This result was thought to be due to the fact that women can define and express the negative emotions they experience more easily than men (Akay, Oğuzhan & Güdücü Tüfekçi, 2024; Uzak & Yanardağ, 2024). According to Sağır (2014), women are more likely to use positive coping methods, while men tend to lean towards negative strategies. Özcan (2019) proposed that women's emotional structures may be more sensitive, necessitating greater support in coping with stress. Thus, these results may reflect gender roles and societal expectations, particularly in patriarchal contexts like Türkiye, where women are often tasked with fulfilling multiple roles (Acar, 2019).

The study also revealed significant differences in PTSD levels based on whether participants lost a relative in the earthquake, with those experiencing loss reporting higher PTSD levels. This finding corroborates prior research by Kurt and Gülbahçe (2019), highlighting the profound impact of personal loss on PTSD. Bullock, Haddow and Coppola (2016) stated that physical environmental incidents, injuries, deaths and financial losses that occur after a disaster can bring traumatic reactions. As a result of our study, it was seen that



the participants' own injury status did not have a significant relationship with their PTSD levels. At this point, it was thought that the participants may not have perceived their own injuries as traumatic in addition to death and other losses. It can be said that even if the spiritual well-being of the participants is strong, when it comes to a real loss, this well-being decreases considering the results in the anomie sub-dimension.

Furthermore, we identified positive correlations between spiritual well-being and coping attitudes. As spiritual well-being levels increased, so did coping attitudes, suggesting that spiritual resources may enhance psychological health. According to a study conducted immediately after the earthquake, it points to the importance of having positive resources such as hope and well-being for individuals to cope with post-traumatic symptoms (Karabacak Çelik, 2023). Previous studies (Ekşi & Kardaş, 2017; Karademir & Eryücel, 2023) affirm the importance of spiritual well-being in personal and social contexts. However, while a positive relationship between spiritual well-being and PTSD was found, it may be influenced by time, as initial attachment to spiritual resources could increase stress, whereas long-term engagement may bolster coping skills.

Notably, we found significant relationship between the anomie sub-dimension and PTSD levels. Increased anomie, characterized by social norm uncertainty, was associated with higher PTSD symptoms. This aligns with results indicating that traumatic events can disrupt daily routines and social connections, leading to isolation and existential questioning (Wood et al., 2018). In our study, it was found that the loss of a relative increased PTSD symptoms, whereas direct injury in the earthquake did not have a significant relationship with PTSD symptoms. In a similar study conducted with earthquake survivors (Uzak & Zubaroglu-Yanardağ, 2024), it was found that losing a relative and being trapped under rubble increased the level of traumatic stress. In two studies conducted in 2008 on the Wenchuan earthquake (Kun et al., 2009; Chan et al., 2011), loss of a relative (parent, friend, neighbour) in the earthquake was found to be associated with the rate of experiencing PTSD.

Interestingly, while coping attitudes positively predicted PTSD levels, the relationship was complex. Ineffective coping strategies, such as emotional avoidance, were linked to higher PTSD symptoms. Studies by Alshahrani et al. (2022) and Ime (2024) similarly found passive coping strategies correlated positively with PTSD symptoms. Lastly, the study indicated that spiritual well-being did not significantly predict PTSD levels, suggesting that its impact may not be as direct as previously thought. Conversely, coping attitudes were found to be significant predictors of PTSD severity, emphasizing the crucial role of coping strategies in managing traumatic experiences.

## 6. Conclusion and suggestions

This research highlights the intricate relationship between PTSD, spiritual well-being, and coping skills among survivors of the 6 February 2023 earthquake. The findings suggest that the adverse effects of the earthquake are closely linked to spiritual well-being and coping mechanisms. To mitigate these effects, multifaceted approaches are essential. Enhancing psychological support systems, incorporating practices like meditation and mindfulness, and providing spiritual counselling can yield positive outcomes. Additionally, psycho-education programs tailored to different age groups may bolster coping skills. Group psychotherapy sessions that encourage emotional expression and social support are particularly vital for individuals who have lost loved ones and feel socially isolated. Future longitudinal studies are recommended to explore the long-term impacts of such traumatic events on mental health and coping strategies. Although the effects of PTSD may occur in the long term, it should not be forgotten that the participants' stress levels related to the earthquake may have changed or that they may have received psychological support since the data of the study were collected one year after the earthquake.

The study was limited to university students studying in Northern Cyprus who were caught in the earthquake zone on 6 February. In this context, it is thought that collecting data from university students who stayed in the country after the earthquake and people at different educational levels who are not students and who have always lived there will both contribute to the literature and direct studies on earthquake victims.

**Research and publication ethics statement:** This is a research article, containing original data, and it has not been previously published or submitted to any other outlet for publication. The author followed ethical principles and rules during the research process. In the study, informed consent was obtained from the volunteer participants and the privacy of the participants was protected.

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## References

- Acar, H. (2019). Türk kültür ve devlet geleneğinde kadın. *İnsan ve insan*, 6(21), 395-411. <https://doi.org/10.29224/insanveinsan.536610>
- Disaster and Emergency Management Authority-AFAD. (2023). 6 Şubat 2023 Kahramanmaraş depremleri saha çalışmaları ön değerlendirme formu. <https://deprem.afad.gov.tr/content/137retrieved> from 10th october, 2023
- Ai, A. L., Peterson, C., & Huang, B. (2003). The effect of religious-spiritual coping on positive attitudes of adult Muslim refugees from Kosovo and Bosnia. *The International Journal for the Psychology of Religion*, 13(1), 29-47. [https://doi.org/10.1207/S15327582IJPR1301\\_04](https://doi.org/10.1207/S15327582IJPR1301_04)
- Akay, G., Oğuzhan, H., & Güdücü Tüfekçi, F. (2024). Kahramanmaraş depremi sonrası üniversite öğrencilerinde algılanan stres düzeyleri ile öznel iyi oluş durumları arasındaki ilişkinin belirlenmesi. *Journal of University Research*, 7(1), 40-47. <https://doi.org/10.32329/uad.1358958>
- Alshahrani, K., Johnson, J., & O'Connor, D. B. (2022). Coping strategies and social support are associated with post-traumatic stress disorder symptoms in Saudi paramedics. *International Journal of Emergency Services*, 11(2), 361-373. <https://doi.org/10.1108/IJES-08-2021-0056>
- American Psychiatric Association. (2022). *Diagnostic and statistical manual of mental disorders* (5th ed., text rev.). <https://doi.org/10.1176/appi.books.9780890425787>
- Aydin, A., Barut, Y., Kalafat, T., Boysan, M., & Beşiroğlu, L. (2012). travma sonrası stres bozukluğu belirtileri ölçeği-kendini değerlendirme (tssbö-kd) türkçe formunun psikometrik özellikleri. *Anatolian Journal of Psychiatry/Anadolu Psikiyatri Dergisi*, 13(2)125-130.
- Babbie, E. R. (2016). *The practice of social research*. Cengage Learning.
- Baltaş, Z., & Baltaş, A. (2000). *Stres ve başa çıkma yolları*. Remzi Kitabevi.
- Bozdağ, F. (2015). *İç göç yaşamış ve yaşamamış ergenlerin benlik kurguları, uyum sorunları ve başa çıkma tarzları* [Yüksek lisans tezi] Hacettepe Üniversitesi, Lisansüstü Eğitim Enstitüsü.
- Brandstädter, J., & Renner, G. (1990). Tenacious goal pursuit and flexible goal adjustment: Explication and age-related analysis of assimilative and accommodative strategies of coping. *Psychology and Aging*, 5(1), 58-67.
- Bullock, J. A., Haddow, G., & Coppola, D. P. (2016). *Managing children in disasters: Planning for their unique needs*. CRC Press.
- Cengiz, K., Küçükural, Ö. & Gür, H. (2021). *Türkiye’de spiritüel arayışlar*. İletişim.
- Chan, C. L. W., Wang, C., Qu, Z., Lu, B., Ran, M., Ho, A. H. Y., & Zhang, X. (2011). Posttraumatic stress disorder symptoms among adult survivors of the 2008 Sichuan earthquake in China. *Journal of Traumatic Stress*, 24(3), 295-302.
- Cüceloğlu, D. (1998). *İnsan ve davranışı*. Remzi Kitabevi.
- Çağış, Z. G. (2023). Sakin benliğin genel sağlık ile ilişkisinde öznel iyi oluş ve temel psikolojik ihtiyaçların aracı rolü. *Nesne-Psikoloji Dergisi*, 11(27), 25-38. <https://doi.org/10.1108/10.7816/nesne-11-27-03>
- Dai, W., Chen, L., Lai, Z., Li, Y., Wang, J., & Liu, A. (2016). The incidence of post-traumatic stress disorder among survivors after earthquakes: A systematic review and meta-analysis. *BMC Psychiatry*, 16(1),1-11. <https://doi.org/10.1186/s12888-016-0891-9>
- Dawson, B., & Trapp, R.G. (2001 [3rd Edition]). *Probability & related topics for making inferences about data. Basic & Clinical Biostatistics*. Lange medical Books/McGraw-Hill Medical Publishing Division, pp. 69-72).

- Dicle, A. N., & Erşanlı, K. (2019). Başa çıkma tutumlarını değerlendirme ölçeğinin Türkçeye uyarlama geçerlilik ve güvenilirlik çalışması. *The Journal of Academic Social Science*, 16(16), 111-126. <https://doi.org/10.16992/ASOS.783>
- Dressler, W. W. (1985). The social and cultural context of coping, action, gender and symptoms in a southern black community. *Soc Sci Med*, 21(5), 499-506.
- Duru, H., & Gültekin, F. (2021). COVID-19 salgını sürecinde bireylerin psikolojik sağlamlıkları: Stresle başa çıkma tarzları ve ontolojik iyi oluş. *Turkish Studies – Social Sciences*, 16(3), 1011-1029. <https://doi.org/10.47356/turkishstudies.49900>
- Ekşi, H., Boyalı, C., & Ümmet, D. (2019). Öğretmen adaylarının spiritüel iyi oluş ile yaşamda anlam değişkenlerinin psikolojik dayanıklılığı yordaması: Bir yapısal eşitlik modeli (YEM) denemesi. *Kastamonu Education Journal*, 27(4), 1695-1704. <https://doi.org/10.24106/kefdergi.3256>
- Ekşi, H., & Kardaş, S. (2017). Spiritual well-being: Scale development and validation. *Spiritual Psychology and Counseling*, 2, 73-88. <https://doi.org/10.12738/spc.2017.1.0022>
- Farooqui, M., Quadri, S. A., Suriya, S. S., Khan, M. A., Ovais, M., Sohail, Z., & Hassan, M. (2017). Posttraumatic stress disorder: A serious post-earthquake complication. *Trends in Psychiatry and Psychotherapy*, 39, 135-143. <https://doi.org/10.1590/2237-6089-2016-0029>
- Feder, A., Ahmad, S., Lee, E. J., Morgan, J. E., Singh, R., Smith, B. W., & Charney, D. S. (2013). Coping and PTSD symptoms in Pakistani earthquake survivors: Purpose in life, religious coping and social support. *Journal of Affective Disorders*, 147(1-3), 156-163. <https://doi.org/10.1016/j.jad.2012.10.027>
- Fredrickson, B. L. (2001). The role of positive emotions in positive psychology. *American Psychologist*, 4(56), 218-226.
- Fortuna, L. R., Martinez, W., & Porche, M. v. (2023). Integrating Spirituality and Religious Beliefs in a Mindfulness Based Cognitive Behavioral Therapy for PTSD with Latinx Unaccompanied Immigrant Children. *Journal of Child & Adolescent Trauma*, 16(3), 481-494. <https://doi.org/10.1007/s40653-023-00541-1>
- Galea, S., Nandi, A., & Vlahov, D. (2005). The epidemiology of post-traumatic stress disorder after disasters. *Epidemiologic Reviews*, 27(1), 78-91. <https://doi.org/10.1093/epirev/mxi003>
- Gencer, N., Obuz, A. T., & Babahanoğlu, R. (2021). Üniversite öğrencilerinde spiritüel iyi oluş ve toplumsal cinsiyet algısı. *Hitit İlahiyat Dergisi*, 20(2), 717-75. <https://doi.org/10.14395/hid.951202>
- Göçen, A. (2019). Öğretmenlerin yaşam anlamı, psikolojik sermaye ve cinsiyetinin psikolojik iyi oluşlarına etkisi. *Cumhuriyet International Journal of Education*, 8(1), 145. <https://doi.org/10.30703/cije.457977>
- Gönültaş, O., & Karataş, Z. (2023). Özel yetenekli ergenlerde psikolojik iyi oluş ile algılanan sosyal yetkinlik arasındaki ilişki. *Afyon Kocatepe Üniversitesi Sosyal Bilimler Dergisi*, 25(2), 516-533. <https://doi.org/10.32709/akusosbil.1054947>
- Hacıoğlu, M., Aker, T., Kutlar, T., & Yaman, M. (2002). Deprem tipi travma sonrasında gelişen travma sonrası stres bozukluğu belirtileri alt tipleri. *Düşünen Adam: Psikiyatri ve Nörolojik Bilimler Dergisi*, 15, 4-15.
- Hong, C., & Efferth, T. (2016). Systematic review on post-traumatic stress disorder among survivors of the Wenchuan earthquake. *Trauma, Violence, & Abuse*, 17(5), 542-561.
- İşık, E., & Bedel, A. (2015). Ergenlerde başa çıkma stratejileri ile öznel iyi oluş arasındaki ilişkiler. *Selçuk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi* (34), 53-60.

- İme, Y. (2024). Social support and resilience among 2023 Türkiye earthquake survivors: Spirituality as a mediator. *Spiritual Psychology and Counseling*, 9(1), 45-56. <https://doi.org/10.37898/spiritualpc.1380158>
- Kaplan, E., & Beydağ, K. D. (2023). Evde yatağa bağımlı hastaya bakım veren bireylerde bakım yükü ve spiritüel iyi oluş ilişkisi. *Fenerbahçe Üniversitesi Sağlık Bilimleri Dergisi*, 3(1), 11-21. <https://doi.org/10.56061/fbujohs.1104915>
- Karabacak Çelik, A. (2023). deprem sonrası travma belirtileri, umut ve iyi oluş arasındaki ilişkinin incelenmesi. *TRT Akademi*, 8(18), 574-591. <https://doi.org/10.37679/trta.1275268>
- Karataşoğlu, Y. (2019). *Ebeveynden algılanan psikolojik kontrol ve depresyon ilişkisinde ontolojik iyi oluşun aracı rolü*. [Yüksek Lisans Tezi] İstanbul Arel Üniversitesi Sosyal Bilimler Enstitüsü.
- Kardaş, S. (2017). *Sanal kimlik ve spiritüel iyi oluşun üniversite öğrencilerinin narsistik eğilimlerini yordayıcılığı* (Doktora tezi) Marmara Üniversitesi.
- Kim, J., & Kim, J. (2019). The effect of spiritual well-being on stress coping. *International Journal of Advanced Culture Technology*, 7(3), 1-9.
- Kun,P., Chen, X., Han, S., Gong, X., Chen, M., Zhang, W., Yao, L.(2009). Prevalence of post-traumatic stress disorder in Sichuan Province, China after the 2008 Wenchuan earthquake, *Public Health*,123(11), 703-707.
- Kutlu, Ö., & Demir, E. (2022). Pediatri Kliniğinde Yatan Hastaların Ebeveynlerinin Spiritüel İyi Oluşlarının Anksiyete ve Depresyon Düzeyine Etkisinin Belirlenmesi. *Balıkesir Sağlık Bilimleri Dergisi*, 11(2), 272-279. <https://doi.org/10.53424/balikesirsd.949631>
- Kurt, E., & Gülbahçe, A. (2019). Van Depremini yaşayan öğrencilerin travma sonrası stres bozukluğu düzeylerinin incelenmesi. *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 23(3), 957-972.
- Levine, P. A. (2015). *Travma ve anı*. Butik Yayıncılık ve Kişisel Gelişim Hiz. Tic. A.Ş.
- Mayordomo, T., Viquer, P., Sales, A., Satorres, E., & Meléndez, J. C. (2021). Resilience and coping as predictors of well-being in adults. In *Mental Health and Psychopathology* (pp. 265-277) Routledge.
- Mikaeili, N., & Eyni, S. (2022). The mediating role of self-efficacy in the relationship between cognitive appraisal and spiritual well-being of veterans with post-traumatic stress disorder. *Journal of Pizhühish dar dīn va Salāmat*, 8(3), 21-37. <https://doi.org/10.22037/jrrh.v8i3.34470>
- Nurkan, A. (2020). *Yetişkinlerin spiritüel iyi oluş düzeyleri ile bağlanma stilleri ve olumlu sosyal davranış düzeyleri arasındaki ilişkinin incelenmesi* [Yüksek lisans tezi]. İstanbul Sabahattin Zaim Üniversitesi Sosyal Bilimler Enstitüsü.
- Özaydınlık, K. (2014). Toplumsal cinsiyet temelinde Türkiye’de kadın ve eğitim. *Sosyal Politika Çalışmaları Dergisi* (33). <https://doi.org/10.21560/spcd.03093>
- Özcan, Z. (2019). Mülteci öğrencilerin kültürel uyumları ile dinî başa çıkmaları arasındaki ilişki üzerine bir araştırma. *Cumhuriyet İlahiyat Dergisi*, 23(1), 127-147. <https://doi.org/10.18505/cuid.510680>
- Özgen, F., & Aydın, H. (1999). Travma sonrası stres bozukluğu. *Klinik Psikiyatri*, 1, 34-41.
- Pargament, K. I. (1999). The psychology of religion and spirituality? Yes and no. *International Journal for the Psychology of Religion*, 9(1), 3-16.
- Park, C. L. (2017). Spiritual well-being after trauma: Correlates with appraisals, coping, and psychological adjustment. *Journal of Prevention & Intervention in the Community*, 45(4), 297-307. <https://doi.org/10.1080/10852352.2016.1197752>

- Ramadan, M., Kheirallah, K., Saleh, T., Bellizzi, S., & Shorman, E. (2022). The relationship between spirituality and post-traumatic stress symptoms in Syrian adolescents in Jordan. *Journal of Child & Adolescent Trauma*, 15(3), 585-593. <https://doi.org/10.1007/s40653-021-00401-w>
- Rapson-Gomez & Fisher, J. W. (2005). The spiritual well-being questionnaire: Testing for model applicability, measurement and structural equivalencies, and latent mean differences across gender. *Personality and Individual Differences*, 39(8), 1392. <https://doi.org/10.1016/j.paid.2005.03.023>
- Rezaei Aghuei, A., Hojjati, H., Hekmati Pour, N., Nejat, H., & Akbari, A. (2024). The application of spiritual self-care pattern to increase resilience in spouses of veterans with post-traumatic stress disorder. *Journal of Health Reports and Technology*, 10(1). <https://doi.org/10.5812/jhrt-143489>
- Rybinska, Y., Antonivska, M., Serbova, O., Mykolaenko, M., Frolova, O., & Kolpakchy, O. (2023). war-psychological skills for coping with traumatic events: helping ukraine. *BRAIN. Broad Research in Artificial Intelligence and Neuroscience*, 14(1), 88-104. <https://doi.org/10.18662/brain/14.1/408>
- Sağır, Z. (2014). *Suriyeli mültecilerde dini başa çıkma ve ruh sağlığı* [Yayınlanmamış yüksek lisans tezi] Marmara Üniversitesi Sosyal Bilimler Enstitüsü.
- Savcı, M., & Aysan, F. (2014). Üniversite öğrencilerinde algılanan stres düzeyi ile stresle başa çıkma stratejileri arasındaki ilişki. *Uluslararası Türk Eğitim Bilimleri Dergisi*, 3, 44-56.
- Slater, C. L., Bordenave, J., & Boyer, B. A. (2015). Impact of spiritual and religious coping on PTSD. In *Comprehensive Guide to Post-Traumatic Stress Disorder* (pp. 1–13). Springer International Publishing. [https://doi.org/10.1007/978-3-319-08613-2\\_49-1](https://doi.org/10.1007/978-3-319-08613-2_49-1)
- Soysal, C. K., & Wilcomb, C. J. (2015). Mindfulness, self-compassion, self-efficacy, and gender as predictors of depression, anxiety, stress, and well-being. *Mindfulness*, 6(2), 221. <https://doi.org/10.1007/s12671-013-0247-1>
- Suri, R., & Rao, J. (2014). Impact of spiritual marketing on different segments of tourists and their evaluation of the site. *Journal of Business & Economic Polic*, 1(1), 26-34.
- TenHouten, W. D. (2016). Normlessness, anomie, and the emotions. *Sociological Forum*, 31(2), 465-486.
- Tunç, P. (2021). COVID-19 pandemisinde travmatik stres belirtileri ve ontolojik iyi oluş arasındaki ilişkide anksiyetenin aracı rolü. *Psikiyatride Güncel Yaklaşımlar*, 13(1), 40-58. <https://doi.org/10.18863/pgy.892821>
- Turan, S. (2013). Yeni di ni hareketlerle ilgili Türkiye'deki ve Batı'daki literatür. *Uluslararası Sosyal Araştırmalar Dergisi*, 6(27), 554-589.
- Uğurluoğlu, D., & Erdem, R. (2019). Travma geçiren bireylerin spiritüel iyi oluşlarının travma sonrası büyümeleri üzerine etkisi. *Dokuz Eylül Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 21(3), 833-858. <https://doi.org/10.16953/deusosbil.50773>
- Uzak, B., & Zubaroglu Yanardağ, M. (2024). Algılanan sosyal destek, travmatik stres ve psikolojik iyi oluş arasındaki ilişkinin incelenmesi: depremedeler üzerine bir araştırma. *Tıbbi Sosyal Hizmet Dergisi*, 12(23), 74-96. <https://doi.org/10.46218/tshd.1364244>
- Wood, J. D., Ware, C. M., Correll, T., Heaton, J. E., McBride, T. and Haynes, J. T. (2018). Relationship between spiritual well-being and post-traumatic stress disorder symptoms in United States Air Force remotely piloted aircraft and intelligence personnel. *Military Medicine*, 183(9-10), e489-e493.
- Wortmann, J. H., Park, C. L., & Edmondson, D. (2011). Trauma and PTSD symptoms: Does spiritual struggle mediate the link? *Psychological Trauma: Theory, Research, Practice, and Policy*, 3(4), 442-452. <https://doi.org/10.1037/a0021413>



Wrzesniewski, K., & Chylinska, J. (2007). Assessment of coping styles and strategies with school-related stress. *School Psychology International*, 28(2), 179194.

Yılmaz, Ö. (2019). *Farklı okul türlerinde görev yapan öğretmenlerin spiritüel iyi oluş düzeyleri ile mutluluk düzeyleri arasındaki ilişkinin incelenmesi* [Yüksek lisans tezi] İstanbul Sabahattin Zaim Üniversitesi Sosyal Bilimler Enstitüsü.



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*Araştırma makalesi/Research article*

# Analysing Post-earthquake Crime through Statistical Data: Findings from the Kahramanmaraş Earthquakes

İstatistiksel Verilerle Deprem Sonrası Suçların Analizi:  
Kahramanmaraş Depremlerinden Elde Edilen Bulgular

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## Abstract

This study analyses the occurrence of crimes in earthquake-affected regions, with a particular focus on the aftermath of the Kahramanmaraş earthquakes. Drawing on routine activity theory, social disorganization theory, and therapeutic community theory, utilizing data sourced from the Turkish Ministry of Justice, this study aims to identify the types of crimes in earthquake-affected regions and examine the dynamics of their fluctuating trends, including increases and decreases. In this study, we employed a quantitative research design, utilizing descriptive, explanatory, and comparative analysis methods. The statistical data includes eighteen different types of crimes, which we have divided into three

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main categories: property crimes, crimes against life and sexual crimes. By dividing the period into pre-earthquake and post-earthquake periods (early, late, and entire), the study compares rates of different types of crimes to determine variations and underlying reasons. Routine activity theory and social disorganization theory attempt to explain the increase in crime rates following disasters by highlighting disruptions in societal structures and daily routines. Alternatively, therapeutic community theory suggests that decreased crime rates can be attributed to social solidarity aiming to restore the pre-earthquake social order. The results indicate that the decrease in crime rates during a post-earthquake period can be attributed to the therapeutic community effect, while the subsequent rise in crime rates aligns with routine activity theory as a delayed effect. We conclude that crime rates following the Kahramanmaraş earthquake changed in different periods and according to crime types. Crime rates initially decreased across all categories in the early period, increased in all crimes during the late period, while there was a general decline in crimes other than crimes against life over the entire period.

**Keywords:** *crime rate, therapeutic community, routine activity, social disorder, earthquake*

## Öz

Bu çalışmanın temel amacı depremler vb. doğal afetler sonrasında ortaya çıkan sosyal düzensizlik ortamının neticesinde suç oranlarında nasıl bir değişim olduğunu anlamaya çalışmaktır. Bu çalışma özellikle 6 Şubat 2023 tarihinde meydana gelen Kahramanmaraş merkezli depremlerden en fazla etkilenen beş il olan Adıyaman, Gaziantep, Hatay, Kahramanmaraş ve Malatya'daki ve tüm Türkiye genelindeki suç oranlarının deprem öncesi döneme göre nasıl bir değişim yaşadığını analiz etmektedir. Doğal afetler sonrasındaki suç davranışlarının açıklanmasında sıklıkla kullanılan rutin aktivite, sosyal düzensizlik ve teröpetik topluluk teorilerinden faydalanarak Türkiye Cumhuriyeti Adalet Bakanlığı'ndan elde edilen verileri analiz ettik. On sekiz ayrı suç türüne ait elde ettiğimiz verileri mala karşı suçlar, cana karşı suçlar ve cinsel suçlar olarak sınıflandırdık. Rutin faaliyet teorisi ve sosyal düzensizlik teorisi afet sonrası suç oranlarındaki artışı açıklamaya çalışırken, terapötik topluluk teorisi azalan suç oranlarının deprem öncesi sosyal düzeni yeniden tesis etmeyi amaçlayan sosyal dayanışmadan kaynaklandığını öne sürmektedir. Nicel desende betimleyici, açıklayıcı ve karşılaştırmalı analiz tekniğini kullandık. Deprem öncesi ve deprem sonrası olarak iki temel döneme ayırdık. Depremi hemen ertesinde ve geç dönemde suç davranışlarının durumunu analiz edebilmek amacıyla deprem sonrası dönemi erken, geç ve yekpare olarak sınıflandırdık. Suç çeşitleri, dönemler ve iller arasında bir karşılaştırma yaptık. Yaptığımız analiz neticesinde Kahramanmaraş depremi sonrası suç oranlarının döneme ve suç çeşidine göre farklılaştığı sonucuna ulaştık. Buna göre, erken dönemde tüm suçlarda azalma, geç dönemde tüm suçlarda artış ve yekpare dönemde hayata karşı işlenen suçlar dışındaki

suçlarda azalma olduğu ortaya çıktı. Sonuçlar, deprem sonrası erken dönemde suç oranlarındaki azalmanın terapötik topluluk etkisine atfedilebileceğini, geç dönemdeki artışın ise gecikmiş bir etki olarak rutin faaliyet teorisiyle uyumlu olduğunu göstermektedir.

**Anahtar sözcükler:** *suç, terapötik topluluk, rutin aktivite, sosyal düzensizlik, deprem*

## Introduction

Natural disasters cause significant social and economic disruption in the affected regions, often leading to changes in the population structure near the surrounding areas, disrupting community functioning and altering the routine activities of residents (Zahnow et al., 2017, p. 857). All these changes disrupt social order. Such disruptions in social cohesion and order can create conditions where criminal behavior is more likely to occur. Therefore, while a connection between natural disasters and crime may be observed, the relationship is complex and influenced by various factors.

Numerous studies have examined this connection, focusing on how natural disasters influence crime rates and shift crime patterns (Bradley et al., 2023; Duramy, 2011; Silverio-Murillo et al., 2021; Thurston et al., 2021; Walker et al., 2012). While some studies show that crime rates increase after natural disasters (N. Ç. Erkan & Sevin, 2018; Ferraro, 1995; Frailing et al., 2015; Frailing & Harper, 2010; Thurston et al., 2021; Zahnow et al., 2017; Zhou, 1997), in contrast others indicate that crime rates decrease (Barton et al., 2020; Fritz, 1996; García Hombrados, 2020; Tezcan, 2023; Weil, 2020). In addition, various research reveal that changes depend on the type of crime (Bailey et al., 2002; Breetzke et al., 2016; Zahran et al., 2009). Such contradictory findings arise from the fact that the relationship between natural disasters and crime can vary based on factors like the time elapsed after the disaster, cultural differences, and the type of crime.

In Türkiye, too, numerous studies examine the economic and psychosocial impacts of earthquakes (Birkök & Eroğlu, 2011; S. Erkan, 2010; Kardeş & Tanhan, 2018; Kasapoğlu, 2001; Sabuncuoğlu et al., 2003; Tanhan & Mukba, 2015; Tuna et al., 2012). Sosyal ve Ekonomik Zarar Görebilirlik Endeksi (SEZGE) (Social and Economic Vulnerability Index) reveals that Van province has a high level of vulnerability. This study demonstrates that the lack of prior assessment of this situation has led to significant shortcomings in disaster preparedness in Van Province (Özceylan & Coşkun, 2012). However, there is a limited number of studies examining the phenomenon of crime following earthquakes (Akkuş & Efe, 2016; Avaner & Ayas, 2021; Fırat, 2022; Tezcan, 2023), which natural environment suffered at different times, causing injuries and deaths of thousands of living creatures, additionally leaving temporary or permanent devastations to structures found in all kinds of habitats. The world has begun to transform more and more into a vulnerable state with man's conscious/unconscious interventions to the natural environment. In the historical process, the world witnessed many natural disasters. The places where natural disasters occurred are subject to security

security problems as well. The individuals with criminality potential tend to crimes in environment where living or non-living creatures has been damaged physically or spiritually because of natural disasters. In this study, the impact/s of natural environmental disasters within the scope of the theory of crime (individual - target - crime. In a study that relies on statistical data, only property crimes were analyzed based on crime statistics following the earthquakes that occurred in Elazığ and Malatya in 2020 (Avaner & Ayas, 2021). Akkuş and Efe (2016), relying solely on interviews with two law enforcement officials, explored how theft and looting arose from security vulnerabilities exposed during the 1999 Marmara Earthquake and the 2011 Van Earthquake. In their study, they indicate that in areas where security was fully restored, crime rates either decreased significantly or were not reported at all (Akkuş & Efe, 2016).

Based on quantitative data from the Turkish Ministry of Justice, this article aims to investigate whether the number of crimes increased after the Kahramanmaraş earthquakes. Although some previous studies have addressed crime incidents as part of their analysis of the socio-economic effects of earthquakes, this study seeks to fill the gap in the literature due to the scarcity of independent studies specifically focusing on the relationship between earthquakes and crime. This gap is particularly noteworthy considering Türkiye's location in an earthquake-prone region with frequent seismic activity. In this study, which uses a quantitative approach, we aimed to identify the changes in crime patterns following natural disasters. We believe that the data obtained will make a significant contribution to qualitative studies, helping to better understand the issue. For this reason, we conducted a study based on statistical data.

### **Method**

In this study, we employed a quantitative research design, utilizing descriptive, explanatory, and comparative analysis methods. To measure the impact of the 6 February 2023 Kahramanmaraş earthquakes on crime rates, we requested from the Ministry of Justice, General Directorate of Judicial Records and Statistics. Particularly, we sought information on the number of investigation files opened by prosecutors in the five provinces most affected by the earthquakes-Kahramanmaraş, Adıyaman, Malatya, Gaziantep, and Hatay-as well as the total number of prosecution investigation files for Türkiye in general.

The data covers the five years before the earthquake and extends through the end of 2023. In order to make a comparative analysis we requested files for both the earthquake-affected provinces and also for the entire country. We aimed to ensure that the changes we observed were specifically related to the impact of the earthquake rather than reflecting a broader trend across Türkiye. Since the post-earthquake data does not cover a complete year (7 February to 31 December 2023), we calculated the monthly averages of all years and post-earthquake data for an accurate comparison.

We organized the data into specific evaluation periods. The data is divided into two main categories: pre-earthquake and post-earthquake periods. Pre-earthquake period refers to the time between January 2018 and 6 February 2023. To better understand the post-

earthquake period, we compared the data with that of the past five years. Post-earthquake period is further divided into three phases for clearer comparison. The first phase, known as the Early Period, covers the first three months following the earthquake, from February 7 to 6 May 2023. The second phase, referred to as the Late Period, extends from 7 May to 31 December 2023. Finally, the Entire Post-Earthquake Period includes all data from 7 February to 31 December 2023. In the literature on the disaster management cycle, the emergency response phase, referred to as the rescue/response phase, covers the first seven days; the relief phase extends up to three months; and the rehabilitation/reconstruction phase starts after three months and spans several years, encompassing the “new normal” (Khan, Vasilescu, & Khan, 2008; Shaw, 2006). Studies examining crime following natural disasters often define the early phase as the initial three-month period (Abe, Wiwattanapantuwong & Honda, 2014; Leitner, Barnett, Kent & Barnett, 2011). On the base of the aforementioned studies, we designated the first three months following the earthquake as the early phase in our study. The period following the first three months, which we defined as the late period, falls within the reconstruction period, which, of course, is still ongoing. This periodization allowed us to analyze changes in crime rates effectively over time.

We calculated the rate per 100,000 people, and the changes in the rates were assessed according to the previous periods. Calculating the overall change only for the entire period and comparing it to 2023 can be misleading, as the pre-earthquake data for 2023 does not represent a full-year rate. Consequently, this limitation could result in inaccurate evaluations of crime trends.

We conducted the validity and reliability analyses using IBM SPSS Statistics software, version 29. In this study, factor analysis was adopted to assess the validity of our dataset. The results indicate that the first component accounts for 74.619% of the variance, highlighting the prominence of the core structures of our measurement tool. Furthermore, we conducted a reliability analysis of the variables reflecting average monthly crime rates in five cities. Through such analysis, the consistency and validity of the data were evaluated. The Cronbach’s Alpha value from the reliability analysis was found to be 0.87, confirming that our data denote high reliability.

### **1. Crimes and disasters**

Social disorder and chaos following natural disasters facilitate the emergence of criminal behavior. When we examine criminological theories that seek to understand how criminal behavior emerges, we see that social disorder plays an important role in the emergence of crime. According to Cohen and Felson, and in the light of their routine activity theory, three elements must align for criminal activity to occur: an offender, a suitable target, and the absence of guardians (Cohen & Felson, 1979). The social structure disruptions following natural disasters create an environment of disorder, which facilitates the convergence of the three elements required for a crime to emerge according to the routine activity theory. In Shaw and McKay’s social disorganization



theory, social disorganization in a neighborhood is related to loss of social control. Social disorganization refers to the failure of members of a society to maintain their shared values and effective social controls (Kubrin & Wo, 2016). Studies based on the routine activity theory and social disorganization theory reveal that natural disasters increase inequality thus leading to higher crime levels (Prelog, 2016; Zahnow et al., 2017).

Various damages occur in the social structure during and after disasters. Some of them are the dysfunctionalization of institutions and the disappearance of some norms and rules (Firat, 2022). This situation leads to the emergence of fear of crime, as well as criminal behavior. The emergence of fear of crime is not only related to crime rates or numbers (Lee, 2007; Wilson & Kelling, 1982). People who experience fear of crime do so by observing their surroundings and analyzing the associates' risks (Ferraro, 1995) Various studies have shown that fear of crime escalates in communities characterized by social disorder and chaos (Erkan and Sevin, 2018; Ferraro, 1995)

On the other hand, some studies reveal that crime rates decrease when community awareness increases after a natural disaster (Barton et al., 2020; Fritz, 1996; Weil, 2020). Among these studies, Weil (2020) contributes to the literature by conducting both statistical and survey-based analyses. Weil (2020) concludes that certain forms of social solidarity can be harmful, citing examples such as specific groups monopolizing resources to the detriment of others or communities organizing to evade shared responsibilities. According to Drabek, while the issue of social solidarity has many side streets, a central observation is that crises can trigger short-term collective unity. During such events, various forms of antisocial behavior, including the commonly anticipated looting, are often temporarily suspended (Drabek, 1986). Another study shows that after Hurricane Andrew in Florida in 1992, the crime rate decreased due to an increase in motivated offenders and explicit targets, but also due to an increase in informal guardianship (Cromwell et al., 1995). After the 2011 Great East Japan earthquake, crime rates were found to have fallen (Fukuma et al., 2017).

Although it is widely believed, mostly due to media portrayals, that criminal activity rises after natural disasters, it is essential to analyze crime rates in relation to situational factors. The news reflected in the media predominantly focuses on property crimes, particularly looting and theft, thus such media coverage can trigger fear of crime. After earthquakes and other natural disasters, fear of crime occurs among the public due to the news reflected in the media (Tezcan, 2023). The perception that crime rates, especially looting, increase after disasters is known as “the disaster myth” (Nogami, 2018; Quarantelli and Dynes, 1972; (Nogami, 2018; Tierney et al., 2006; Wenger et al., 1975).

According to the 2010 National Urban Citizen Safety Survey conducted in Chile, due to media influence, people living in areas far from the epicenter of the earthquake are more likely to believe that crime will increase after the earthquake than those living close to the epicenter (García Hombrados, 2020). This phenomenon of media-induced fear of crime following natural disasters is not limited to any one region or time period but is

observed globally across different countries and contexts. For example, similar media portrayals of looting and crimes following earthquakes have been observed in different parts of the worlds. In New Zealand, The New Zealand Herald newspaper published on 4 September 2010, with the headline “Looters hitting Christchurch following quake” (NZPA, 2010), reflecting widespread concern about property crimes in the aftermath of the earthquake. Similarly, in Japan, The Asahi Shimbun newspaper reported on the increasing threats of looters and fraudsters, with the headline “Quake victims now battling looters, thieves and scam artists” (The Asahi Shimbun, 2024). In Türkiye, following the Kahramanmaraş earthquake, media outlets promptly reported on concerns about looting, with headlines such as “Looting and hygiene worries add to rescuers’ burden in Turkey” (Kucukgocmen, 2023), indicating that public anxiety about criminal behaviors was also prevalent. There is no direct correlation between high fear of crime and actual crime rates. For instance, García Hombrados (2020) observes that, despite a high number of media reports about property crimes, overall property crime rates are decreasing after the 2010 Chilean earthquake. In Türkiye, the fear of crime amplified by the media after natural disasters appears to be greater than the actual crime rates (Tezcan, 2023). However, the fact that fear of crime exceeds the actual occurrence of crime does not necessarily indicate that crime is nonexistent or has decreased. Cooperation has an important role in crime reduction, as solidarity increases after natural disasters concerning the desire to overcome common suffering and return to the previous order as soon as possible. The resulting solidarity has a role in increasing the cost of committing a crime in neighborhoods (García Hombrados, 2020).

## **2. The 2023 Kahramanmaraş Earthquakes**

Two major earthquakes occurred on 6 February 2023, with the epicentre in Kahramanmaraş, Türkiye. The first earthquake had a magnitude of 7.7 at 04:17 a.m., followed by a second earthquake with a magnitude of 7.6 at 1:24 p.m. The affected area of the earthquake was around 1,200,000 km<sup>2</sup> (SBB, 2024), with a ruptured fault that spans 450 km, affecting a population of 13 million in Türkiye. This covers an area larger than that of many countries and has a population greater than that of many countries, effecting 11 provinces in total, five of which were affected the most: Adıyaman, Gaziantep, Hatay, Kahramanmaraş and Malatya. Furthermore, according to the official reports, approximately 54.000 people died and approximately 107.000 people were injured in the earthquakes (Ministry of Internal Affairs, 2024; SBB, 2024). The total number of destroyed buildings in the disaster was 18.200 and the number of severely damaged and destroyed buildings was 90.609 (SBB, 2024). The magnitude of the figure indicates the extent of the social and economic impact of the earthquake. Table 1 indicates the degree of earthquake damage in the provinces.

**Table 1:** Degree of Earthquake Damage in the Provinces

	Death rate ‰	Destroyed buildings rate ‰	Debris removed rate ‰
Adıyaman	13,2	9,7	26,9
Gaziantep	1,8	1,9	5,2
Hatay	14,3	8,2	30,8
Kahramanmaraş	10,8	6,4	24,9
Malatya	1,5	7,0	34,4

### 3. The crimes after 2023 Kahramanmaraş Earthquakes

The scale of destruction caused by the Kahramanmaraş earthquakes points to a transformation of the natural disaster into a social crisis, leading to the breakdown of social control and the emergence of an environment where disorder prevails. Crime statistics from the Ministry of Justice will support understanding the post-earthquake environment. The statistical data includes eighteen different types of crimes, which we have divided into three categories:

- property crimes
- crimes against life
- sexual crimes

We categorized the crimes of theft, fraud, looting, damage to property, disposition of lost or mistakenly seized property, and violation of residence immunity as *property crimes*; deprivation of liberty, deliberate killing, negligent killing, deliberate injury, negligent injury, maltreatment, persecution, and wyte as *crimes against life*; sexual abuse of children, sexual harassment, sexual intercourse with minors, sexual assault as *sexual crimes*.

**Table 2:** The number of crime files (calculated monthly average) and crime rates per 100.000 people according to crime types in the earthquake-affected provinces

		<i>Property Crimes</i>		<i>Crimes Against Life</i>		<i>Sexual Crimes</i>	
		<i>N</i>	<i>Rate</i>	<i>N</i>	<i>Rate</i>	<i>N</i>	<i>Rate</i>
<i>Pre-earthquake</i>	2018	7.509	121	5.792	93	825	13
	2019	7.289	116	6.012	96	857	14
	2020	6.847	108	5.511	87	757	12
	2021	7.593	118	6.056	94	845	13
	2022	9.679	150	6.768	105	927	14
	2023 (B. E.)	10.184	165	6.863	111	846	14
<i>Post-earthquake</i>	Early Period	5.841	95	6.124	99	377	6
	Late Period	10.664	173	8.233	133	786	13
	Entire Period	<b>9.107</b>	<b>148</b>	<b>7.507</b>	<b>122</b>	<b>650</b>	<b>11</b>

**Source:** Ministry of Justice, General Directorate of Judicial Records and Statistics

The result reveals that the number of crimes and rates decreased in the early period and increased in the late period compared to the past periods (Table 2). When the entire period after the earthquake is analyzed, there is a decrease in crimes against property and sexual crimes, while there is an increase in crimes against life.

### 3.1. Property crimes

The majority of studies on the occurrence and changes in crime following natural disasters focus on property crimes. Research examining property crimes after earthquakes and other natural disasters indicates that it is not possible to make a general conclusion about changes in crime rates following such events. When we look at the crime rates, the result reveals that the property crime rates decreased in the early post-earthquake period and increased in the late post-earthquake period compared to the past periods. When the entire period after the earthquake is analyzed, there is a decrease in crimes against property (Table 3).

Similar trends of crime rate fluctuations can be observed in other regions disrupted by natural disasters, however local context and recovery processes seem to highly influence these outcomes. For instance, studies of the 2010 Chilean earthquake show that, after the earthquake, the population organized itself to overcome the damage caused by the earthquake and, as a result, crime rates decreased (Larranaga & Herrera, 2010 cited in García Hombrados, 2020), “despite the limited capacity of formal institutions to enforce the law in the days following the earthquake, the looting of dwellings and habited places was a very rare event” (Grandón et al., 2014 cited in García Hombrados, 2020). According to Roy’s study on earthquakes in India, there is an increase in crimes against property after natural disasters (Roy, 2010). These two examples show similarities with the situation in Türkiye. The first example aligns with the trends in crimes in Türkiye during the early post-disaster period, while the second reflects trends in Türkiye a year after the disaster.

The decrease in the rate of crimes against property in the immediate aftermath of the Kahramanmaraş earthquake can be explained by the collectivity in the community, as well as by the decreased effectiveness of security forces and judicial authorities. To test this, we examined the number of crime reports filed in Türkiye immediately after the earthquake. There was an approximate 10% decrease in the property crime rate immediately after the earthquake in Türkiye (Table 3). Therefore, it does not seem possible to explain this phenomenon with the decrease in the effectiveness of judicial authorities and security forces. Since it seems to be more related to collectivity.

**Table 3:** Comparison of the rate (per 100.000) and changes (%) in property crimes between earthquake provinces and the national average (Türkiye)

		Earthquake Provinces			Türkiye		
		Property Crimes (N)	Rate	Change (%)	Property Crimes (N)	Rate	Change (%)
Pre-earthquake	2018	7.509	121		106.496	130	
	2019	7.289	116	-4	100.349	121	-7
	2020	6.847	108	-7	91.734	110	-9
	2021	7.593	118	10	107.168	127	15
	2022	9.679	150	26	126.521	148	17
	2023 (B. E.)	10.184	165	10	132.133	155	4
Post-earthquake	Early Period	5.841	95	-43	119.247	140	-10
	Late Period	10.664	173	83	125.029	146	5
	Entire Period	9.107	148	-1	122.403	143	-3

**Source:** Ministry of Justice, General Directorate of Judicial Records and Statistics

When analyzed by crime types, there is a decrease in all crime types in the early post-earthquake period compared to 2022. However, there is an increase in the late period, except for looting and violation of residence immunity. It is seen that the type of crime against property with the highest rate of increase in the late period is fraud. Furthermore, when analyzed by province, the crime rate decreased in all provinces in the early period compared to both the pre-earthquake period in 2023 and 2022. Among these provinces, the decrease in the crime rate in Gaziantep province, which has the lowest level of damage among these provinces, is close to Türkiye in general (-13%, pre-earthquake 2023; -7%, 2022), while it shows a very significant decrease in other provinces (from -59% to -71%, pre-earthquake 2023; from -49% to -63, 2022) (Table 4).

Table 4: Property crime rate and changes in the rates by provinces

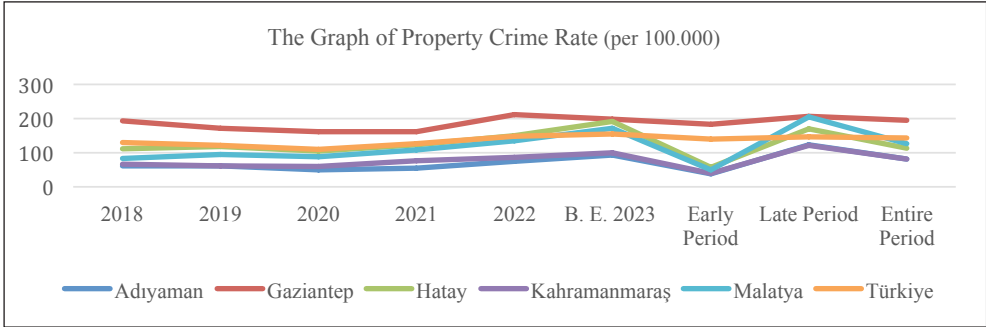
		Adiyaman		Gaziantep		Hatay		Kahramanmaraş		Malatya	
		Rate	Change (%)	Rate	Change (%)	Rate	Change (%)	Rate	Change (%)	Rate	Change (%)
Pre-earthquake	2018	61		193		111		66		84	
	2019	62	2	171	-12	117	6	61	-8	94	13
	2020	49	-21	162	-5	105	-11	59	-3	88	-7
	2021	55	12	161	-1	123	18	76	28	108	23
	2022	74	35	212	32	150	22	87	14	135	25
	2023 (B. E.)	94	26	198	-7	191	27	100	16	171	27
Post-earthquake	Early Period	38	-59	184	-7	57	-70	40	-60	49	-71
	Late Period	123	224	206	12	170	198	122	207	205	315
	Entire Period	81	9	195	-8	113	-24	81	-7	127	-6

**Source:** Ministry of Justice, General Directorate of Judicial Records and Statistics

Analyzing the entire post-earthquake period, an increase in crime rates is observed in all provinces compared to 2022, except for Gaziantep, where the increase is in line with the national trend in the entire country. However, compared to the pre-earthquake period of 2023, only in Hatay, the province with the highest loss of life and the most significant debris removal, is there an 11% decrease in crimes against property.

The graph clearly shows a decline in the early and entire periods, followed by an increase in the late period (Graph 1).

**Graph 1:** Property crime rate (per 100.000)



*Source:* Ministry of Justice, General Directorate of Judicial Records and Statistics

As seen in Graph 1, in the immediate aftermath of the Kahramanmaraş earthquake, crimes against property declined slightly in Gaziantep and across Türkiye, but crimes against property declined sharply in other affected provinces, and after the first three months, crimes against property started to increase in all earthquake-affected cities. This is in line with Weil (2020), who demonstrates the relationship between collectivity and crime rates after natural disasters. Weil's findings indicate that solidarity increases immediately after the disaster and returns to its previous level as recovery progresses. Disaster-related altruism and helping behavior fade over time (Weber & Peek, 2012). The fact that the magnitude and impact of the Kahramanmaraş earthquake may also have an impact on the long-term increase in crimes against property supports Prelog's (2016) finding that there is a relationship between the magnitude of the earthquake and crimes against property. The finding by (García Hombrados, 2020) that the significant loss of workplaces and decrease in job opportunities resulting from the severity of the earthquake led to an increase in property crimes can explain the rise in property crime rates after the initial damages of the Kahramanmaraş earthquake were eliminated.

### 3.2. Crimes against life

Studies on crimes against life after natural disasters often rely on both survey research and crime statistics. Zahran et. Al (2009) examined the crime rates after different natural disasters in Florida and revealed that violent crimes decreased. In contrast, Adams and Adams (1984) reported a significant increase in violent crimes following the eruption of Mount St. Helens in 1980.



When we look at the rate of change in crimes against life after the Kahramanmaraş earthquake, we see that in the early period, there is a decrease of 11% in the earthquake region compared to the previous year, while there is a decrease of 4% across Türkiye. In the entire period, there is a significant increase of 17% in the cities in the earthquake region compared to the previous year (Table 5).

Negligent homicide and negligent injury, which are included in the category of crimes against life, increased significantly in all five provinces most affected by the earthquake in the early. It is related to the applications of the relatives of the deceased and injured people who remained in the rubble of the buildings that collapsed after the earthquake. The much lower number of investigation files in the early period can be explained by the low effectiveness of the judicial authorities, but it can also be explained by the fact that people have not yet applied for loss of life or injuries as their priority is to survive after the disaster.

**Table 5:** Comparison of the rate (per 100.000) and changes in (%) the crimes against life between earthquake-affected provinces and the national average (Türkiye)

		Earthquake Provinces						Türkiye					
		All crimes against life			Crimes against life without negligent crimes			All crimes against life			Crimes against life without negligent crimes		
		N	Rate	Change (%)	N	Rate	Change (%)	N	Rate	Change (%)	N	Rate	Change (%)
Pre-earthquake	2018	5.792	93		3.287	53		76.785	94		45.538	56	
	2019	6.012	96	3	3.501	56	5	76.653	92	-2	46.648	56	1
	2020	5.511	87	-10	3.418	54	-4	68.508	82	-11	43.729	52	-7
	2021	6.056	94	9	3.575	56	4	76.347	90	10	46.861	55	6
	2022	6.768	105	11	4.089	63	13	84.821	99	10	52.643	62	12
	2023 (B. E.)	6.863	111	6	4.045	66	4	84.971	100	0	52.342	61	-1
Post-earthquake	Early Period	6.124	99	-11	1.887	31	-53	81.297	95	-4	47.605	56	-9
	Late Period	8.233	133	34	4.152	67	120	97.043	114	19	55.389	65	16
	Entire Period	7.507	122	17	3.020	49	-23	89.170	104	5	51.497	60	-2

**Source:** Ministry of Justice, General Directorate of Judicial Records and Statistics

Excluding negligent crimes, the rate of crime against life decreased by 53% in the early period in the earthquake provinces, while it increased by 120% in the late period. In the entire period, there is a 23% decrease compared to 2022. Excluding negligent crimes, it is much higher than the decrease in crimes against life in Türkiye (2%) (Table 5). This shows that the decrease in crimes against life in earthquake provinces is related to the concept of therapeutic community. It is clear that the increase in all crimes against life, including negligent crimes,

is not a rise caused by the environment caused by social disorder, but is related to the lawsuits filed for the loss of life from building collapses after the earthquake.

**Table 6:** Rate of crimes against life and changes in the rates by provinces

		Adıyaman		Gaziantep		Hatay		Kahramanmaraş		Malatya	
		Rate	Change (%)	Rate	Change (%)	Rate	Change (%)	Rate	Change (%)	Rate	Change (%)
Pre-earthquake	2018	73		98		94		91		99	
	2019	75	3	102	4	96	2	92	1	100	2
	2020	65	-14	91	-11	89	-7	79	-14	96	-4
	2021	67	3	104	13	93	5	87	9	105	9
	2022	69	2	118	14	102	9	96	11	114	9
	2023 (B. E.)	68	-1	116	-2	119	17	102	6	129	13
Post-earthquake	Early Period	138	103	99	-15	145	22	61	-40	31	-76
	Late Period	122	-12	146	48	130	-10	114	87	141	361
	Entire Period	130	90	123	4	137	35	88	-9	86	-25

**Source:** Ministry of Justice, General Directorate of Judicial Records and Statistics

When we analyze the crimes against life by provinces, excluding the crimes of negligence, we see that there is a decrease in all provinces in the entire period compared to 2022 (Table 7). In the early period, it was observed that there was a decrease in crimes against life in the earthquake-affected provinces and Türkiye in general, albeit at different rates (Table 6).

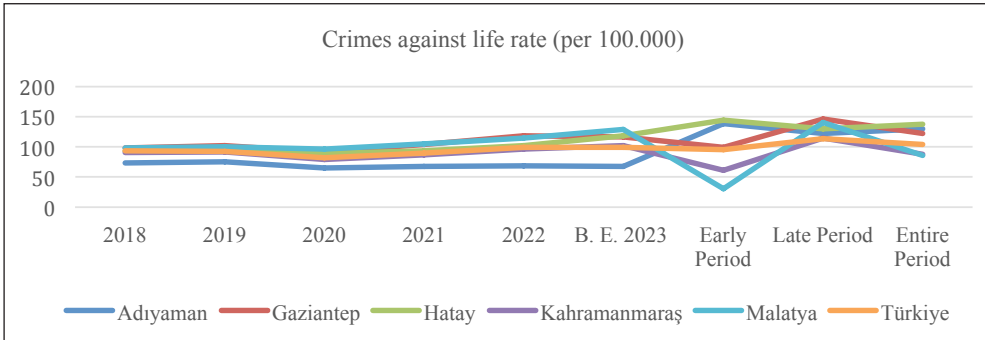
**Table 7:** Rate of crimes against life and changes in the rates by provinces excluding negligent crimes

		Adıyaman		Gaziantep		Hatay		Kahramanmaraş		Malatya	
		Rate	Change (%)	Rate	Change (%)	Rate	Change (%)	Rate	Change (%)	Rate	Change (%)
Pre-earthquake	2018	34		56		54		54		57	
	2019	39	14	58	4	56	4	55	2	62	10
	2020	36	-10	57	-2	54	-3	51	-8	62	-1
	2021	37	3	59	3	57	4	53	5	64	4
	2022	39	6	70	18	61	7	63	18	72	12
	2023 (B. E.)	39	1	68	-3	68	13	64	2	78	8
Post-earthquake	Early Period	18	-55	51	-24	22	-68	20	-69	15	-80
	Late Period	40	128	76	48	64	196	61	209	79	415
	Entire Period	29	-25	64	-9	43	-29	41	-35	47	-34

**Source:** Ministry of Justice, General Directorate of Judicial Records and Statistics

This shows that post-earthquake solidarity was effective not only in the earthquake-affected region but also in Türkiye as a whole. Studies show that the therapeutic effect is effective immediately after the earthquake and that crime rates return to their previous course in the following period (Prelog, 2016; Weber and Peek, 2012). The significant decrease in the early period and the significant increase in the late period are also seen in Graph 2. So, the findings of this study are in line with previous studies.

**Graph 2:** Crimes against life rate (per 100.000)



**Source:** Ministry of Justice, General Directorate of Judicial Records and Statistics

### 3.3. Sexual crimes

Although most of the studies examining criminal behavior after natural disasters are related to crimes against property, women and children are expected to be more vulnerable in an environment of social disorder. Therefore, since sexual offenses are mostly committed against women and children, various studies are showing that sexual offenses increase after natural disasters (Duramy, 2011). A meta-analysis by Thurston et al (2021) reveals that violence against women increases after natural disasters. While analyzing the data on violence against women, they included sexual harassment and rape crimes at this rate. On the other hand, there are examples where increased social solidarity has reduced crimes against women (Thurston et al., 2021). Zahran et al. (2009) examined the course of crimes including index crimes, crimes against property, and violent crimes after natural disasters, and found that only domestic violence crimes including sexual assaults increased.

When examining the rate of change in sexual crimes after the Kahramanmaraş earthquake, we see that in the early period, there is a decrease of 55% in the earthquake provinces compared to the previous year, while there is a decrease of 28% across Türkiye. When we look at the late period, we see that sexual crimes have increased significantly in earthquake-affected provinces (Table 8). Although there is an increase in sexual crimes in the late period, there is a general downward trend when compared to previous years.

Looking at the entire post-earthquake period, the decrease in sexual crime rates compared to 2022 is the same in terms of earthquake-affected provinces and Türkiye. This observation is in line with existing literature indicating that the earthquake has a reducing effect on sexual offenses. This situation seems to be valid not only for the earthquake zone but also for the whole country.

**Table 8:** Rate of sexual crimes and change in rates

		Earthquake Provinces			Türkiye		
		Sexual Crimes (N)	Rate	Change in Rate (%)	Sexual Crimes (N)	Rate	Change in Rate (%)
Pre-earthquake	2018	825	13		12.158	15	
	2019	857	14	3	12.167	15	-1
	2020	757	12	-13	10.754	13	-12
	2021	845	13	11	11.548	14	6
	2022	927	14	9	12.805	15	10
	2023 (B. E.)	846	14	-4	13.054	15	2
Post-earthquake	Early Period	377	6	-55	9.377	11	-28
	Late Period	786	13	109	9.713	11	4
	Entire Period	650	11	-26	9.545	11	-26

Source: Ministry of Justice, General Directorate of Judicial Records and Statistics

When analyzed on a provincial basis, it is observed that there was a decrease of 60 percent or more in provinces other than Gaziantep. When analyzed on a provincial basis, it is observed that there was a decrease of 60 percent or more in provinces other than Gaziantep, which had the lowest damage level among the five provinces in the early period, and the decrease in Gaziantep was the same with Türkiye in general. However, in the late period, it could not maintain the same level as Türkiye in general, and an increase of 49 percent was observed. On the other hand, both the graph and the table show that the increase in the late period in other provinces is significant (Table 9, Graph 3).

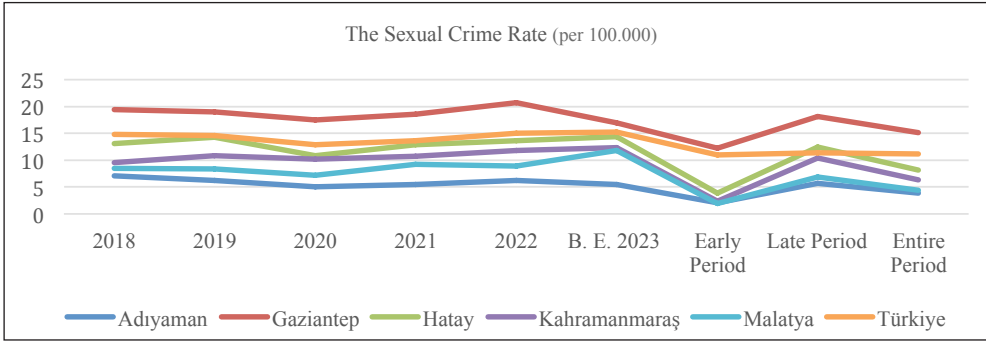
When the post-earthquake period is evaluated as a whole, i.e. in the late period, it is observed that sexual crimes decreased both in Türkiye as a whole and in all earthquake-affected provinces in total and separately.

**Table 9:** Rate of sexual crimes and changes in the rates by provinces

		Adıyaman		Gaziantep		Hatay		Kahramanmaraş		Malatya	
		Rate	Change (%)	Rate	Change (%)	Rate	Change (%)	Rate	Change (%)	Rate	Change (%)
Pre-earthquake	2018	7		19		13		10		9	
	2019	6	-12	19	-2	14	9	11	13	8	-2
	2020	5	-20	17	-8	11	-24	10	-5	7	-14
	2021	5	10	19	6	13	18	11	5	9	29
	2022	6	14	21	12	14	6	12	10	9	-4
	2023 (B. E.)	6	-12	17	-18	14	6	12	5	12	32
Post-earthquake	Early Period	2	-62	12	-28	4	-73	2	-81	2	-84
	Late Period	6	173	18	49	12	223	10	347	7	257
	Entire Period	4	-38	15	-27	8	-40	6	-46	4	-51

Source: Ministry of Justice, General Directorate of Judicial Records and Statistics

**Graph 3: Sexual crime rate (per 100.000)**



Source: Ministry of Justice, General Directorate of Judicial Records and Statistics

Silverio-Murillo et al. (2021) found that sexual crime rates, which increased immediately after the earthquake, did not return to their previous levels in the late period while other crimes returned to their previous levels. The results of our study show the opposite of the findings reported by Silverio-Murillo. In other words, the changes in crime rates that occur immediately after the earthquake are expected to return to their pre-earthquake levels after a certain period.

### Conclusion

Natural disasters such as earthquakes cause various social and economic disruptions in the social structure. Some of the studies on the reality of disaster myths, in which the belief that crime rates will increase due to the disruptions and problems arising after the disaster, reveal that there is not always a linear relationship between crime and natural disasters. Studies reveal that crime rates increase after disasters as well as studies showing that they decrease or remain constant. While the routine activity theory and social disorganization theory attempt to explain the rise in crime rates following disasters, the therapeutic community theory argues that crime rates may initially decrease in the immediate aftermath of a disaster due to the social solidarity driven by a collective desire to restore the pre-disaster social structure. When both these theories are combined, it might be concluded that, while crime rates initially decrease in the immediate aftermath of a disaster due to social solidarity, they rise as society enters the reconstruction phase, since the process of rebuilding the social structure during this time leads to turmoil increase and instability.

In the light of our present analysis, we concluded that crime rates changed in different periods and according to crime types after the Kahramanmaraş earthquake. The results indicate that in the early stages of disasters, there is a higher level of community spirit and solidarity, leading to a decrease in crime rates. This finding aligns with some previous studies. Both statistical and qualitative studies support this conclusion. This study's finding is consistent with the literature, which shows that property crime rates decreased in the early period after the earthquake. This phenomenon is attributed to a therapeutic community effect

in which common pain is tried to be overcome by solidarity. The desire to return to the pre-disaster order in affected regions strengthens social bonds. As a result, social control mechanisms are activated, and informal surveillance, along with the emerging sense of collectivity, contributes to a reduction in criminal behavior.

The crime rates increased in the late period in all provinces and all crime types due to job losses and business disruptions as people returned to normal life and routine activities. In the aftermath of a natural disaster, central nodes of activity, such as educational institutions, the home, and the workplace, may be forced to close temporarily or permanently. Such closures can have a severe impact on an individual's routine behavior, increasing the likelihood of criminal activity and victimization. Disruptions in routine activities lead to economic difficulties, which in turn result in an increase in criminal behavior. Therefore, the rise in property-related crimes, in particular, can be attributed to the influence of these economic problems.

Looking at the entire period, when compared to the data for 2022, there is a significant decrease in sexual offenses in all provinces, a slight decrease in property offenses, a decrease in crimes against life in all provinces when negligent crimes are not included, and an increase in provinces except Kahramanmaraş and Malatya when they are included. The largest increase is in Adıyaman, the second province that suffered the most from the earthquake.

In conclusion, while the observed decrease in crime rates in the early post-earthquake period can be attributed to the therapeutic community, the subsequent increase in crime rates can best be explained by the routine-activity theory as a late effect. Qualitative studies should determine the therapeutic effects of community and the dimensions of solidarity. This study highlights the necessity for new qualitative research to explore the topic further. Additionally, we recommend research to understand the level of fear of crime after the earthquake and the validity of the disaster myth in the context of the Kahramanmaraş earthquake.

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## References

- 'A frenzy of looting' seen in Haiti's capital. (19 June 2010). *CNN*. <http://www.cnn.com/2010/WORLD/americas/01/18/haiti.looting.earthquake/index.html>
- Abe, T., Wiwattanapantuwong, J., & Honda, A. (2014). Dark, cold and hungry, but full of mutual trust: Manners among the 2011 great east Japan earthquake victims. *Psychology in Russia: State of the Art*, 7(1), 4-13.
- Adams, P. R. & Adams, G. R. (1984). Mount Saint Helens's ashfall: evidence for a disaster stress reaction. *American Psychologist*, 39(3), 252-260.
- Akkuş, Z. & Efe, T. (2016). Doğal çevre felaketlerinin suça etkisi. *İnönü Üniversitesi Hukuk Fakültesi Dergisi*, 7(1), 1-24. <https://doi.org/10.21492/inuhfd.245653>
- Avaner, T. & Ayas, Ö. (2021). Jandarma bölgesinde afet yönetimi ve malvarlığına karşı suç: Elazığ ve Malatya örnekleri. *Global Journal of Economics and Business Studies*, 10(20), 26-41.
- Bailey, A. J., Wright, R. A., Mountz, A. & Miyares, I. M. (2002). (Re)producing Salvadoran transnational geographies. *Annals of the Association of American Geographers*, 92(1), 125-144.
- Barton, M. S., Weil, F. D., Valasik, M. A., Rackin, H. M., & Coto, L. (2020). What was washed away and what remained: an assessment of the impact of Hurricane Katrina on index crimes. *Journal of Crime and Justice*, 43(5), 640-658.
- Birkök, M. C., and Eroğlu, C. (2011). 17 Ağustos Marmara Depremi sonrası Adapazarı'nda sosyal yapı problemleri: Bilişim ölçekleriyle sosyolojik değerlendirmeler, (Araştırma projesi ön sonuçları: I. Genel sorular değerlendirmesi). *Journal of Human Sciences*, 8(1), 1-20. <https://www.j-humansciences.com/ojs/index.php/IJHS/article/view/182>
- Bradley, T., Martin, Z., Upreti, B. R., Subedu, B. & Shrestha, S. (2023). Gender and disaster: The impact of natural disasters on violence against women in Nepal. *Journal of Asian and African Studies*, 58(3), 354-371. <https://doi.org/10.1177/00219096211062474>
- Breetzke, G. D., King, M. & Fabris-Rotelli, I. (2016). The impact of the Canterbury Earthquakes on the temporal and spatial patterning of crime in Christchurch, New Zealand. *Journal of Criminology*, 51(1), 135-156. <https://journals.sagepub.com/doi/10.1177/0004865816679687>
- Cohen, L. E., and Felson, M. (1979). Social change & crime rate trends: A routine activity approach. *American Sociological Review*, 44(4), 588-608. <https://doi.org/10.2307/2094589>
- Cromwell, P., Dunham, R., Akers, R., & Lanza-Kaduce, L. (1995). Routine activities and social control in the aftermath of a natural catastrophe. *European Journal on Criminal Policy and Research*, 3(3), 56-69. <https://doi.org/10.1007/BF02242928>
- Drabek, T. E. (1986). *Human system responses to disaster: An inventory of sociological findings*. Springer.
- Duramy, B. (2011). Women in the aftermath of the 2010 Haitian earthquake. *Emory International Law Review*, 25(3), 1193-1215.
- Erkan, N. Ç., & Sevin, B. (2018). An examination of fear of crime: Kadıköy example. *Journal of Planning*, 28(3), 315-327. <https://doi.org/10.14744/planlama.2018.82787>
- Erkan, S. (2010). Deprem yaşayan ve yaşamayan okul öncesi çocukların davranışsal/duygusal sorunlarının karşılaştırmalı olarak incelenmesi. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 28(28), 55-66.
- Ferraro, K. F. (1995). *Fear of crime: Interpreting victimization risk*. State University of New York Press.
- Fırat, M. (2022). Deprem ve toplumsal etkileri. *Tezkire*, 80, 47-72.
- Frailing, K., & Harper, D. W. (2010). Crime and hurricanes in New Orleans. In D. L. Brunson, D. Overfelt, and S. J. Picou (Eds.), *The Sociology of Katrina: Perspectives on a Modern Catastrophe*. Rowman and Littlefield Publishers, pp: 51-68.

- Frailing, K., Harper, D. W. & Serpas, R. (2015). Changes and challenges in crime and criminal justice after disaster. *American Behavioral Scientist*, 59(10), 278–291. <https://doi.org/10.1177/0002764215591184>
- Fritz, C. E. (1996). *Disasters and mental health: Therapeutic principles drawn from disaster studies* Disaster Research Center 10, University of Delaware.
- Fukuma, S., Ahmed, S., Goto, R., Inui, T. S., Atun, R., & Fukuhara, S. (2017). Fukushima after the Great East Japan Earthquake: Lessons for developing responsive and resilient health systems. *Journal of Global Health*, 7(1), 010501. <https://doi.org/10.7189/jogh.07.010501>
- García Hombrados, J. (2020). The lasting effects of natural disasters on property crime: Evidence from the 2010 Chilean earthquake. *Journal of Economic Behavior and Organization*, 175, 114–154. <https://doi.org/10.1016/j.jebo.2020.04.008>
- Kardaş, F. & Tanhan, F. (2018). Van depremini yaşayan üniversite öğrencilerinin travma sonrası stres, travma sonrası büyüme ve umutsuzluk düzeylerinin incelenmesi. *Van Yüzüncü Yıl Üniversitesi Eğitim Fakültesi Dergisi*, 15(1), 1-36.
- Kasapoğlu, M. A. (2001). *Doğu Marmara 1999 depreminin sosyolojik araştırması: Hasarları azaltma ve toplumu depreme hazırlıklı kılma*. Sosyoloji Derneği.
- Khan, H., Vasilescu, L. G. & Khan, A. (2008). Disaster management cycle- A Theoretical approach. *Management and Marketing*, 6(1), 43-50.
- Kubrin, C. E., & Wo, J. C. (2016). Social disorganization theory's greatest challenge. In A. R. Piquero (Ed.), *The Handbook of Criminological Theory*. John Wiley and Sons.
- Kucukgocmen, A. (2023, February 11). Looting and hygiene worries add to rescuers' burden in Turkey. *Reuters*. <https://www.reuters.com/world/middle-east/looting-hygiene-worries-add-rescuers-burden-turkey-2023-02-11/>
- Lee, M. (2007). *Inventing fear of crime: Criminology and the politics of anxiety*. Willan Pub.
- Leitner, M., Barnett, M., Kent, J., & Barnett T. (2011). The Impact of Hurricane Katrina on Reported Crimes in Louisiana: A Spatial and Temporal Analysis. *The Professional Geographer*, 63(2), 244-261.
- Ministry of Internal Affairs. (8 February 2024). *Türkiye'nin birlik ve dayanışma gücü depremle sinandı, asrın felaketi asrın dayanışmasına dönüştü!*. <https://www.icisleri.gov.tr/turkiyenin-birlik-ve-dayanisma-gucu-depremle-sinandi-asrin-felaketi-asrin-dayanismasına-donustu8#>
- Nogami, T. (2018). Disaster myths among disaster response professionals and the source of such misconceptions. *Journal of Contingencies and Crisis Management*, 26(4), 491-498. <https://doi.org/10.1111/1468-5973.12218>
- NZPA. (2010). Looters hitting Christchurch following quake. *NZ Herald*. <https://www.nzherald.co.nz/nz/looters-hitting-christchurch-following-quake/SIHUN5YFFVXG6X76BAAVGG4NZQ/>
- Özceylan, D. & Coşkun, E. (2012). Van depremi sonrası yaşananlar ışığında sosyal ve ekonomik zarar görülebilirlik çalışmalarının önemi. *Eskişehir Osmangazi Üniversitesi İİBF Dergisi*, 7(1), 167–186.
- Prelog, A. J. (2016). Modeling the relationship between natural disasters and crime in the United States. *Natural Hazards Review*, 17(1), 04015011. [https://doi.org/10.1061/\(ASCE\)NH.1527-6996.0000190](https://doi.org/10.1061/(ASCE)NH.1527-6996.0000190)
- Quarantelli, E. L. & Dynes, R. R. (1972). *Images of disaster behavior: Myths and consequences* (Preliminary Paper 5). University of Delaware Disaster Research Center.
- Roy, S. (2010). *The impact of natural disasters on violent crime* (Working Paper 57). University of Canterbury.
- Sabuncuoğlu, O., Çevikaslan, A., & Berkem, M. (2003). Depression, anxiety and behavior among adolescents in two affected areas after the Marmara Earthquake. *Turkish Journal Clinical Psy.*, 6(4), 189–197.
- SBB. (2024). *Kahramanmaraş ve Hatay depremleri yeniden imar ve gelişme raporu*. T.C. Cumhuriyeti Cumhurbaşkanlığı Strateji ve Bütçe Başkanlığı.

- Shaw, R. (2006). Indian Ocean tsunami and aftermath: Need for environment-disaster synergy in the reconstruction process. *Disaster Prevention and Management*, 15(1), 5-20.
- Silverio-Murillo, A., De la Miyar, J. R. B. & Márquez-Padilla, F. (2021). Earthquakes and crimes against women. *Feminist Economics*, 1-27. <https://doi.org/10.1080/13545701.2024.2407614>
- Tanhan, F. & Mukba, G. (2015). Investigation of the perception about earthquake based on elementary school students' opinions. *Journal of Human Sciences*, 12(2), 1581-1601.
- Tezcan, A. M. (2023). Deprem ve suç: Zلزele zenginlerine karşı terapötik toplum. In F. Çakı and K. Canatan (Eds.), *Deprem ve toplum: Sosyal projeksiyonlar*, Çizgi, pp. 413-434.
- Quake victims now battling looters, thieves and scam artists. (12 January 2024). *The Asahi Shimbun*. <https://www.asahi.com/ajw/articles/15109671>
- Thurston, A. M., Stöckl, H. & Ranganathan, M. (2021). Natural hazards, disasters and violence against women and girls: A global mixed-methods systematic review. *BMJ Global Health*, 6(4), e004377. <https://doi.org/10.1136/bmjgh-2020-004377>
- Tierney, K., Bevc, C. & Kuligowski, E. (2006). Metaphors matter: Disaster myths, media frames, and their consequences in Hurricane Katrina. *The ANNALS of the American Academy of Political and Social Science*, 604(1), 57-81. <https://doi.org/10.1177/0002716205285589>
- Tuna, A. K., Parin, S. & Tanhan, F. (2012). *Van depremi sosyo ekonomik ve psikolojik durum tespiti raporu* (No:5). Çocuk Vakfı Çocuk Araştırmaları Merkezi.
- Walker, W., Sim, S. & Keys-Mathews, L. (2012, 1 January). *The impact of hurricane on spatial-temporal patterns of crime in mobile, Alabama* [Conference Paper] GIScience, Columbus, Ohio.
- Weber, L. & Peek, L. (2012). *Displaced: Life in the Katrina diaspora*. University of Texas Press. <http://ebookcentral.proquest.com/lib/vuw/detail.action?docID=3443602>
- Weil, F. D. (2020). Researching crime after a disaster: What we can learn from a large survey in New Orleans after Hurricane Katrina. *American Behavioral Scientist*, 64(8),1111-1128. <https://doi.org/10.1177/0002764220938107>
- Wenger, D. E., Dykes, J. D., Sebok, T. D. & Neff, J. L. (1975). It's a matter of myths: An empirical examination of individual insight into disaster response. *Mass Emergencies*, 1, 33-46.
- Wilson, J. Q. & Kelling, G. L. (1982). Broken windows: The police and neighborhood safety. *The Atlantic Monthly*, 249(3), 29-38.
- Zahnow, R., Wickes, R., Haynes, M. & Corcoran, J. (2017). Disasters and crime: The effect of flooding on property crime in Brisbane neighborhoods. *Journal of Urban Affairs*, 39(6), 857-877.
- Zahran, S., Shelley, T. O., Peek, L. & Brody, S. D. (2009). Natural disasters and social order: Modeling crime outcomes in Florida. *International Journal of Mass Emergencies and Disasters*, 27(1), 26-52. <https://doi.org/10.1177/028072700902700102>
- Zhou, D. (1997). Disaster, disorganization, and crime. [Doctoral Dissertation, State University of New York at Albany].



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*Araştırma makalesi/Research article*

# **An Examination of Post-Earthquake Anxiety Levels in Individuals Affected by the 6 February 2023, Kahramanmaraş-Centred Earthquake**

6 Şubat 2023 Kahramanmaraş Merkezli Depremi Yaşayan Bireylerin Deprem Sonrası Kaygı Düzeylerinin İncelenmesi

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**Dönay Nisa Kara\*\***

## **Abstract**

This study aims to examine the impact of the Kahramanmaraş-centred earthquake, which occurred on 6 February 2023, on the anxiety levels of individuals living in the affected regions. The research seeks to understand the psychological effects of natural disasters on individuals, provide a scientific basis for planning post-disaster support programs, and evaluate the demographic factors (age, gender, marital status, socioeconomic status) influencing anxiety levels. Catastrophic events such as earthquakes are crucial for understanding individuals' challenges in the post-trauma process and developing appropriate interventions during this period. The study group

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consists of individuals aged 18 and above who resided in the earthquake-affected regions during the 6 February 2023, earthquake. 260 participants were selected using the snowball sampling method and included in the study voluntarily. These participants experienced the earthquake firsthand and were exposed to varying levels of psychological impact during this period. Data collection tools included the Beck Anxiety Inventory and a Personal Information Form, and the data were gathered through online platforms. The data were analysed using the SPSS-24 software. T-tests, ANOVA, and post-hoc Scheffé tests were conducted to examine the relationships between participants' anxiety levels and demographic variables. The analysis revealed no significant difference in anxiety levels based on gender. However, analyses by age group indicated that individuals aged 18-24 had significantly higher anxiety levels compared to other age groups. Additionally, university graduates were found to have significantly higher anxiety levels compared to individuals with lower educational attainment. These findings underscore the need for psychosocial support programs tailored to young individuals and those with higher educational levels. This study provides valuable insights into the psychological states of individuals after an earthquake and offers critical data for planning support services following natural disasters.

**Keywords:** *anxiety disorder, trauma, natural disasters, psychological effects*

## Öz

Bu çalışma, 6 Şubat 2023 tarihinde meydana gelen Kahramanmaraş merkezli depremin, deprem bölgelerinde yaşayan bireylerin kaygı düzeyleri üzerindeki etkilerini incelemeyi amaçlamaktadır. Çalışma, doğal afetlerin bireyler üzerindeki psikolojik etkilerini anlamayı, afet sonrası destek programlarının planlanmasına bilimsel bir temel oluşturmayı ve özellikle kaygı düzeylerini etkileyen demografik faktörleri (yaş, cinsiyet, medeni durum, sosyo-ekonomik durum) değerlendirmeyi hedeflemektedir. Deprem gibi yıkıcı olaylar, bireylerin travma sonrası süreçte karşılaştıkları zorlukları anlamak ve bu süreçte uygun müdahaleler geliştirmek açısından büyük önem taşımaktadır. Araştırmanın çalışma grubu, 6 Şubat 2023 tarihinde deprem bölgelerinde yaşayan ve 18 yaş üzerindeki bireylerden oluşmaktadır. Toplamda 260 katılımcı, kartopu örnekleme yöntemi ile seçilmiş ve gönüllülük esasına dayalı olarak çalışmaya dahil edilmiştir. Bu katılımcılar, deprem bölgelerinde yaşamış ve bu süreçte çeşitli düzeylerde psikolojik etkilenebilirliğe maruz kalmış bireylerdir. Veri toplama araçları olarak Beck Anksiyete Envanteri ve Kişisel Bilgi Formu kullanılmış, veriler çevrimiçi platformlar üzerinden toplanmıştır. Verilerin analizi SPSS-24 programı ile gerçekleştirilmiştir. T-testi, ANOVA ve Post-Hoc Scheffé testleri uygulanarak katılımcıların kaygı düzeyleri ile demografik değişkenler arasındaki ilişkiler incelenmiştir. Analiz sonuçları, cinsiyet açısından kaygı düzeylerinde anlamlı bir fark olmadığını göstermiştir. Ancak, yaş gruplarına göre yapılan analizlerde, 18-24 yaş grubundaki bireylerin kaygı düzeylerinin diğer yaş gruplarına göre anlamlı derecede daha yüksek olduğu tespit edilmiştir. Ayrıca, üniversite mezunlarının kaygı düzeylerinin daha düşük eğitim düzeyine sahip bireylere kıyasla anlamlı derecede yüksek olduğu bulunmuştur. Sonuçlar,

genç bireyler ve yüksek eğitim düzeyine sahip kişiler için özel olarak tasarlanmış psikososyal destek programlarının gerekliliğini vurgulamaktadır. Bu araştırma, deprem sonrası bireylerin psikolojik durumlarını anlamaya yönelik önemli bir katkı sunmakta ve doğal afetler sonrası destek hizmetlerinin planlanmasında dikkate alınması gereken veriler sağlamaktadır.

**Anahtar sözcükler:** *kayıp bozukluğu, travma, doğal afetler, psikolojik etkiler*

## Introduction

Disasters are defined as natural or human-induced events that cause extensive losses in physical, social, and psychological domains within societies (Karabulut & Bekler, 2019; Şakir, 2019). Natural disasters such as floods, volcanic eruptions, storms, and earthquakes lead to physical destruction and long-term social and psychological impacts on individuals and communities (Nakajima, 2012; Kolk, 2019; Kılıç, 2021). The outcomes of disasters vary depending on the magnitude and duration of the event and the characteristics of the affected population. Such events profoundly disrupt not only physical infrastructure but also social structures and the psychological resilience of individuals (Erkoç, Hamzaçebi, & Baran, 2000; Öztekin & Öрки, 2023). In particular, the inability to adequately meet basic needs in the aftermath of a disaster can create a foundation for severe psychological problems in individuals (Sarman & Tuncay, 2024; Ryff, 1989). Earthquakes are considered one of the most devastating types of natural disasters. Defined as “movements caused by fractures in the earth’s crust that spread in waves and lead to sudden tremors on the surface” (Erkoç, Hamzaçebi & Baran, 2000, p.1), earthquakes occur unexpectedly and cause widespread destruction. Their effects extend beyond physical damage, significantly influencing individuals’ short-, medium-, and long-term psychological health (Nakajima, 2012; Kolk, 2019; Karabulut & Bekler, 2019). The challenges individuals face following an earthquake depend on factors such as the scale of the disaster, the frequency of aftershocks, and the adequacy of post-disaster interventions (Liu et al., 2013; Çelik, 2023).

The psychological issues experienced by individuals affected by earthquakes are often manifested through symptoms of fear, anxiety, and posttraumatic stress disorder (PTSD) (Kolk, 2019). Aftershocks, in particular, can perpetuate a sense of uncertainty and insecurity, exacerbating these issues (Bonanno et al., 2010; Myers and Diener, 1995; Parmaksız, 2020). Studies indicate that prolonged exposure to aftershocks can retrigger trauma, increasing levels of fear and anxiety (Liu et al., 2013; Wang and Zhang, 2015). For instance, during the 1995 Kobe earthquake, intense aftershocks were observed to prolong recovery and deepen psychological impacts (Ishikawa et al., 2013). Similarly, the intense aftershocks following the February 6, 2023, Kahramanmaraş-centred earthquake are believed to have contributed to the emergence of long-term psychological issues among survivors.

PTSD is a disorder that adversely affects individuals’ emotional, cognitive, and behavioural functioning after life-threatening or traumatic events (American Psychiatric Association, 2013; It is characterized by symptoms such as re-experiencing the trauma (e.g., flashbacks or nightmares), avoidance of trauma-related stimuli, and heightened arousal



levels (Morrison, 2019; Kolk, 2019; Özgen & Aydın, 1999; Uğurluoğlu & Erdem, 2019). An increase in anxiety levels negatively affects individuals' mental and emotional balance, thereby reducing overall life satisfaction and quality of life (Yardibi, Kucuktamer & Ozcinar, 2016). Research has shown that the severity of trauma and the lack of social support following the event play significant roles in the development of PTSD (Tanhan & Kayri, 2013; Zhang et al., 2012). Traumatic events like earthquakes complicate individual' return to normalcy and necessitate long-term psychological interventions (Yıldız & Akkoyun, 2023; Corey, Dov & Carol, 2002; Özçetin, Maraş, Ataoğlu & İcmeli, 2008).

The Kahramanmaraş-centred earthquake on 6 February 2023, caused widespread destruction in southeastern Turkey. Over 50,000 deaths and 110,000 injuries were reported in provinces such as Gaziantep, Hatay, Osmaniye, Adıyaman, Şanlıurfa, Diyarbakır, Malatya, and Adana (Yıldız & Akkoyun, 2023). Addressing survivors' psychological challenges of such a large-scale disaster is critical for societal recovery. However, the limited data in the existing literature regarding the psychological conditions of these individuals highlights the need for further research in this area.

This study aims to explore the devastating effects of the Kahramanmaraş-centred earthquake by examining the psychological states of individuals affected by the disaster in the context of PTSD. By understanding the psychological consequences of the earthquake, this research seeks to contribute to the production of scientific knowledge and the development of effective interventions that promote societal recovery and individual well-being.

## **1. Research model**

This study examines the impact of the 6 February 2023 earthquake on the anxiety levels of individuals residing in the affected regions of Kahramanmaraş and its surroundings in Turkey. The research adopts quantitative research methods and employs a correlational survey model. Quantitative research is based on the objective and systematic measurement of numerical data related to an event, situation, or phenomenon, aiming for replicable results (Büyüköztürk, Akgün, Demirel, Karadeniz, & Çakmak, 2015, p. 55). The correlational survey method describes a situation's current state or ongoing characteristics (Taşpınar, 2017, p. 134). This study applied T-tests, ANOVA, and post-hoc Scheffé techniques for data analysis.

## **Population and sample**

The population of this study consists of adults aged 18 and above residing in the earthquake-affected regions of Kahramanmaraş and its surroundings. The sample was selected using the snowball sampling method, which is particularly effective for reaching hard-to-access or specific groups within a population. In this method, participants are recruited through referrals, where one participant suggests others, thereby expanding the sample (Neuman, 2014: 156). Snowball sampling enables access to populations that may otherwise be challenging to reach by leveraging interpersonal connections.

In this study, the target was to reach 300 participants to measure anxiety levels; however, based on voluntary participation, 260 individuals were included. Participants were invited



to the study via an online platform, Google Forms. The data collection process included distributing a Personal Information Form and the Beck Anxiety Inventory to participants. The use of online data collection facilitated participant accessibility and allowed for efficient data acquisition.

## 2. Personal Information form

The researchers developed this form to collect demographic information and variables relevant to the study. It consists of short-answer questions to gather basic information such as gender, age, marital status, perceptions of safety in their city, and whether they have children. The Beck Anxiety Inventory (BAI) was developed by Beck, Epstein, Brown, and Steer (1988) to measure individuals' anxiety levels. Comprising 21 items, the inventory is a four-point Likert-type scale designed as a paper-and-pencil test suitable for adolescents and adults. The scale includes two factors: subjective anxiety and somatic symptoms.

The Turkish version of the inventory was validated, and its reliability was confirmed by Ulusoy, Şahin, and Erkmek (1998, p. 167). Additionally, its validity and reliability have been further supported by Büyüköztürk, Çokluk, and Köklü (2015: 82). Each item is scored between 0 and 3, with higher total scores indicating higher anxiety levels.

## 3. Data analysis

The data collected for the study were analyzed using the SPSS-24 software. The data were systematically processed, and statistical analyses were conducted. T-tests, ANOVA, and post-hoc Scheffe techniques were applied during this process. The analysis results aim to provide comprehensive insights into the anxiety levels of individuals living in earthquake-affected regions and establish a scientific foundation for interventions in this field.

## 4. Findings and discussion

This section presents the findings and interpretations regarding the post-earthquake anxiety levels of individuals who experienced the 6 February 2023 Kahramanmaraş-centred earthquake. The findings are displayed in tables, categorizing the most frequently mentioned themes influencing participants' anxiety levels and their corresponding frequencies. Additionally, the data under each theme have been analysed to detail the factors affecting participants' anxiety levels and the challenges they encountered.

**Table 1:** Frequency Distribution of Participants' Demographic Information (N:260)

Gender	f	%
Female	146	56,2
Male	114	43,8
<b>Age Range</b>		
18-24	129	49,6
25-31	52	20,0
	1393	

32-38	38	14,6
39-45	23	8,8
46 and above	18	6,9
<b>Marital Status</b>		
Married	50	19,2
Single	204	78,5
Divorced	6	2,3
<b>Parenthood</b>		
Yes	59	22,7
No	201	77,3
<b>Educational Level</b>		
Middle School	21	1,2
High School	171	9,2
University	62	83,1
Postgraduate	17	6,5
<b>Socio-economic Status</b>		
Low	21	8,1
Medium	171	9,2
Upper Middle	62	23,7
High	6	2,3

As shown in Table 1, 56.2% (N=146) of the participants are female, while 43.8% (N=114) are male. Additionally, 49.6% (N=129) are in the 18-24 age range, 20% (N=52) in the 25-31 age range, 14.6% (N=38) in the 32-38 age range, 8.8% (N=23) in the 39-45 age range, and 6.9% (N=18) are 46 years and older. In terms of marital status, 19.2% (N=50) are married, 78.5% (N=204) are single, and 2.3% (N=6) are divorced.

**Table 2:** T-test Results of Participants' Anxiety Levels by Gender (N=260)

Gender	N	Mean	SH	df	P
Female	146	24.88	1.04	252	0.06
Male	114	14.07	1.02	7434	

SH: Standard Error, N: Number of Data, Mean: Average

A T-test was conducted to examine the anxiety levels of participants by gender. Table 2 shows that there is no significant difference in anxiety levels between female and male participants ( $P < 0.05$ ). In Table 2, the absence of a significant difference in anxiety levels between female and male participants may indicate that post-earthquake traumatic experiences have a similar impact on both genders or that there are no notable gender-based disparities in access to social support mechanisms.

**Table 3:** ANOVA Test Results of Participants' Anxiety Levels by Education Level

Education Level	df	Mean	F	P
Within Groups	3	1102.521	6.9	0.00
Between Groups	256	159.722		

P<0.05

In Table 3, a one-way ANOVA test was conducted to examine anxiety levels based on participants' educational levels. The table indicates a significant difference in anxiety levels across different educational levels. To further analyse this difference in detail, the researchers applied a post hoc technique.

**Table 4:** Post Hoc Results of Anxiety Levels Based on Participants' Educational Levels

Educational Level		$\bar{x}$	SE	p
Middle School	High School	30,25*	7,73	,00
	University	21,08*	7,34	,04
	Postgraduate	23,64*	7,91	,03
High School	Middle School	-30,25*	7,73	,00
	University	-9,16*	2,71	,01
	Postgraduate	-6,60	4,00	,43
University	Middle School	-21,08*	7,34	,04
	High School	9,16*	2,71	,01
	Postgraduate	2,56	3,18	,88
Post Graduate	Middle School	-23,64*	7,91	,03
	High School	6,60	4,00	,43
	University	-2,56	3,18	,88

A post hoc test measured anxiety based on participants' educational levels. Table 4 reveals significant differences in anxiety levels across educational backgrounds.

Specifically, middle school graduates exhibited significantly lower anxiety levels compared to high school, university, and postgraduate graduates. Similarly, high school graduates displayed lower anxiety levels than university graduates but higher levels than middle school graduates.

On the other hand, university graduates were found to have higher anxiety levels compared to both middle school and high school graduates. Additionally, postgraduate graduates exhibited lower anxiety levels than middle school graduates.

These findings suggest that individuals with higher educational levels often have access to better socioeconomic resources and advanced coping skills, which may help explain the anxiety-reducing effect of educational level.

**Table 5:** Scheffe Test Results for Anxiety Levels Based on Participants' Age Groups

		$\bar{x}$	SE	P
18-24	25-31	1,81	2,04	,94
	32-38	1,09	2,30	,99
	39-45	4,95	2,82	,54
	46 and above	16,58*	3,13	,00
25-31	18-24	-1,81	2,04	,94
	32-38	-,71	2,66	,99
	39-45	3,13	3,12	,90
	46 and above	14,77*	3,40	,00
32-38	18-24	-1,09	2,30	,99
	25-31	,71	2,66	,99
	39-45	3,85	3,29	,84
	46 and above	15,49*	3,56	,00
39-45	18-24	-4,95	2,82	,54
	25-31	-3,13	3,12	,90
	32-38	-3,85	3,29	,84
	46 and above	11,63	3,92	,06
46 and above	18-24	-16,58*	3,13	,00
	25-31	-14,77*	3,40	,00
	32-38	-15,49*	3,56	,00
	39-45	-11,63	3,92	,06

When examining Table 5, the Scheffe test results demonstrate comparisons of anxiety levels among different age groups, revealing significant differences between age ranges. Specifically, participants aged 46 and above exhibited significantly lower anxiety levels compared to all other age groups ( $P < 0.05$ ). The 18-24 age group showed significantly higher anxiety levels than the 46 and above group but did not significantly differ from other age groups ( $P > 0.05$ ). Similarly, the 25-31 age group had significantly higher anxiety levels than the 46 and above group but showed no significant differences with the 18-24, 32-38, or 39-45 age groups ( $P > 0.05$ ). The 32-38 age group demonstrated a significant difference only when compared to the 46 and above group, with no significant differences observed among other groups ( $P > 0.05$ ). Finally, the 39-45 age group did not exhibit significant differences with any other group, although it had higher anxiety levels than the 46 and above group; this difference, however, was not statistically significant ( $P > 0.05$ ).

The table suggests that individuals in older age groups tend to have lower anxiety levels, which may be explained by the development of more effective coping mechanisms and greater resilience through life experiences and past exposure to traumatic events. In particular, individuals aged 46 and above may benefit from emotional regulation skills or resilience gained from previous trauma, contributing to lower anxiety levels. Conversely, younger age

groups, especially those aged 18-24, tend to experience higher anxiety levels, potentially due to uncertainties about the future and limited access to social support mechanisms. These findings emphasize the necessity of tailoring post-earthquake psychological support programs to specific age groups, highlighting the need for more intensive interventions for younger individuals.

**Table 6:** Frequency Distribution of Participants' Sense of Safety in Their Residential Areas

Sense of safety	f	%
Yes	114	43,8
No	146	56,2

According to Table 6, 43.8% of participants (114) reported feeling safe in their residential areas, while 56.2% (146) stated they did not feel safe. This situation can be attributed to various physical and psychological factors experienced after the earthquake. The ongoing aftershocks in the region perpetuate a sense of threat and uncertainty among individuals. Issues such as damaged infrastructure collapsed buildings, and the slow pace of reconstruction weaken the sense of safety.

Additionally, deficiencies in accessing social support mechanisms and perceptions of inequity in aid distribution contribute to the feeling of insecurity. Individuals who lost loved ones or suffered significant physical and psychological harm during the earthquake are observed to develop a persistent sense of threat due to their traumatic experiences. Furthermore, individuals living in temporary shelters (tents or containers) face challenges in achieving a stable sense of safety. These findings highlight the need for measures to enhance safety in post-disaster regions. Accelerating the reconstruction process, strengthening social support mechanisms, and implementing psychological support programs can contribute to individuals feeling safer in their communities. In this regard, it is essential to plan post-disaster policies with a focus on fostering a sense of security.

## 5. Conclusion

It is true that a significant portion of our country is in earthquake-prone regions. Earthquakes are natural disasters with a high potential to cause severe PTSD. In addition to the material damage caused by earthquakes, there are many short-, medium-, and long-term adverse psychological effects on human life. It is expected that PTSD and similar disorders may arise following a traumatic event like an earthquake, and the impact of stress factors on a person's life may vary. The study aims to evaluate the anxiety levels of individuals who experienced the earthquake based on demographic factors such as age, gender, marital status, and socioeconomic status, providing insights into these aspects.

Additionally, the study focused on how the earthquake experience impacts individuals' psychology. Within this scope, the study analyses the emotional challenges faced by individuals in the post-trauma period and their coping mechanisms. The research aims to provide significant data to understand how post-earthquake psychological effects are related to demographic factors and to raise awareness on this issue.

The results of our study indicate no significant difference in anxiety levels between female and male participants. Gender does not seem to affect the anxiety levels of the participants. According to another study, the anxiety levels of women were found to be higher than those of men (Sarman & Tuncay, 2024). Additionally, there is a significant difference in anxiety levels between participants aged 18-24 and those aged 46 and older. Participants aged 46 and older have lower anxiety levels compared to those aged 18-24. Participants aged 25-31 have significantly higher anxiety levels. There is also a significant difference in anxiety levels between participants aged 32-38 and those aged 46 and older. Participants aged 32-38 have significantly higher anxiety levels. A significant difference in anxiety levels is also found between participants aged 39-45 and those aged 46 and older. Participants aged 39-45 have significantly higher anxiety levels. The results suggest that as age increases, anxiety levels after the earthquake decrease. It is thought that older adults have lower anxiety levels due to their greater life experience compared to young adults. As individuals age, they are believed to be more successful in coping with problems and accepting life as it is. Another result of the study is that older individuals have higher awareness of earthquakes, while young adults have lower awareness levels, resulting in higher anxiety levels.

Another finding of the study revealed that anxiety levels were higher among women, participants aged 20-25, and individuals over 56 years old. A similar study found that individuals in older age groups exhibited increased anxiety levels (Akkaya & Polat, 2024). This suggests that women, due to their higher emotional sensitivity, and younger and older individuals, who are more likely to be experiencing an earthquake for the first time, are more profoundly affected by the earthquake and its consequences.

The study also highlights education level as a significant factor influencing anxiety levels; there were significant differences in anxiety levels between middle school graduates and those with high school, university, and postgraduate education. Middle school graduates have lower anxiety levels compared to others (high school, university, and master's). Additionally, high school graduates have lower anxiety levels compared to middle school and university graduates. University graduates have higher anxiety levels compared to middle school and high school graduates. Master's graduates have lower anxiety levels compared to middle school graduates. Examining the anxiety levels of participants by their education levels, it was found that those with higher education levels have higher anxiety levels. Another study found that female students have higher stress levels compared to male students (Kurt & Gülbahçe, 2019). Another research found that individuals with low education levels and socioeconomic status are at higher risk of having high anxiety levels after an earthquake (Priebe et al., 2009).

Examining the safety perceptions of participants in their regions, it was found that they do not feel safe. Another study found that individuals who experienced the earthquake had significantly higher death anxiety levels compared to those who witnessed it from a distance. Consistent with this result, a study conducted in China after the Sichuan earthquake reported that cognitive processes related to death anxiety were activated among university students one week after the earthquake (Özmen & Ocakdan, 2022). Studies have shown that death anxiety is positively related to traumatic events and life-threatening experiences (Dok & Owen,

2021; Noyes, 1980). Another research found that individuals with higher education levels and socioeconomic status are less likely to be affected by the earthquake (Cerdá et al., 2013).

On the other hand, considering the intensive use of digital technologies today, there are studies suggesting that virtual reality-supported intervention programs are effective on individuals with high anxiety levels and can make psychological intervention faster and more organized (Döner and Usta Yeşilbalkan, 2024; Kafes, Çille & Şakiroğlu, 2024).

## **6. Suggestions for further studies**

Systematic and comprehensive initiatives should be implemented to support survivors in the aftermath of an earthquake. These initiatives must address the psychological health and basic care needs of individuals in affected regions. It's critical that mental health services are integrated with immediate relief efforts to ensure that survivors receive holistic care encompassing their physical and emotional well-being. Special attention should be given to vulnerable groups, such as children, the elderly, and individuals with pre-existing mental health conditions, who may require tailored interventions.

In addition to general support, in-depth qualitative studies should be conducted to understand better the psychological impact on individuals most affected by the earthquake. These studies should include interviews with survivors who have experienced significant trauma, exploring their coping mechanisms, emotional responses, and long-term psychological needs. The sample size of such studies should be more comprehensive than 260 participants, as a larger sample would provide a more comprehensive understanding of the diverse experiences and outcomes. Larger-scale studies identify patterns or trends that might not be visible in smaller samples, allowing for more targeted interventions.

Furthermore, it is essential to explore future anxiety and its long-term consequences for earthquake survivors. Longitudinal studies could track the mental health of individuals over time, particularly those who show high levels of anxiety immediately following the disaster. These studies could examine how future-oriented anxiety develops and persists and what interventions might be most effective in alleviating it. Innovative methods such as virtual reality-supported intervention programs should be considered, leveraging current digital technologies to provide immersive therapeutic experiences. These programs could simulate safe environments or coping strategies, helping individuals work through their trauma in a controlled setting.

In addition to cutting-edge digital interventions, periodic psychoeducation sessions should be organized for earthquake survivors. These sessions aim to improve survivors' understanding of their psychological symptoms, provide coping strategies, and offer guidance on how to access further mental health resources. Psychoeducation could be provided in various formats, including workshops, online platforms, and community meetings, ensuring accessibility for all affected individuals. Engaging the community in ongoing mental health education would help prevent the onset of more severe psychological conditions and build resilience among survivors.



This study used the Beck Depression Inventory to assess mental health outcomes. In future research, it would be valuable to apply a variety of psychological scales to gain a more nuanced understanding of the relationship between anxiety and depression among earthquake survivors. Using different tools could help identify specific factors that contribute to the development of both conditions. For example, scales measuring posttraumatic stress, resilience, and social support could be incorporated to explore how these variables interact with anxiety and depression. This approach would allow for a more comprehensive analysis of mental health outcomes and enable the design of more effective intervention programs.

Finally, collaborative efforts between governmental agencies, non-governmental organizations, and mental health professionals are essential in creating sustainable support systems for survivors. Training mental health workers to deal with trauma-specific issues, such as those resulting from natural disasters, should be prioritized. Additionally, community leaders should be involved in these initiatives to help foster trust and ensure that interventions are culturally sensitive and adapted to the population's specific needs.

**Research and publication ethics statement:** This is a research article, containing original data, and it has not been previously published or submitted to any other outlet for publication. Authors followed ethical principles and rules during the research process.

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## References

- Akkaya, M. A., & Polat, Ö. (2024). Deprem bölgesinde görev yapan halk kütüphanesi çalışanlarının deprem kaygısı: Hatay örneği. *Bilgi Yönetimi Dergisi*, 7(1), 16-30.
- American Psychiatric Association, D.S.M.T.F. & American Psychiatric Association, D.S. (2013). *Diagnostic and statistical manual of mental disorders: DSM-5* 5(5) American Psychiatric Association.
- Birliđi, A. P. (2013). *DSM-5 tanı ölçütleri başvuru el kitabı*. E Körođlu (Çev.) Hekimler Yayın Birliđi, 158.
- Büyüköztürk, Ş., Akgün, Ö. E., Demirel, F., Karadeniz, Ş. an&d Çakmak, E. K. (2015). *Bilimsel araştırma yöntemleri*. Pegem Akademi.
- Büyüköztürk, Ş., Çokluk, Ö. and Köklü, N. (2015). *Sosyal Bilimler İçin İstatistik*. Pegem Akademi.
- Cerdá, M., Paczkowski, M., Galea, S., Nemethy, K., Péan, C.,& Desvarieux, M. (2013). Psychopathology in the aftermath of the Haiti earthquake: A population-based study of posttraumatic stress disorder and major depression. *Depress Anxiety*, 30(5), 413-424. 10.1002/da.22007.

- Corey, L. M., Dov, S., & Carol, D. R. (2002). Optimizing well-being: The empirical encounter of two traditions. *Journal of Personality and Social Psychology*, 82(6), 1007 - 1022. 10.1037/0022-3514.82.6.1007.
- Çelik, A. K. (2023). Deprem sonrası travma belirtileri, umut ve iyi oluş arasındaki ilişkinin incelenmesi. *TRT Akademi*, 8(18), 574-591. <https://doi.org/10.37679/trta.1275268>
- Demir, R., Tanhan, A., Çiçek, İ., Yerlikaya, İ., Kurt, S. Ç. & Ünverdi, B. (2021). Yaşam kalitesinin yordayıcıları olarak psikolojik iyi oluş ve yaşam doyumu. *Yaşadıkça Eğitim*, 35(1), 192 - 206. <https://doi.org/10.33308/26674874.2021351256>
- Dok, B., and Owen, F. K. (2021). Psikolojik danışman adaylarının ölüm kaygılarının psikolojik dayanıklılık ve çeşitli değişkenler açısından incelenmesi. *Edu 7: Yeditepe Üniversitesi Eğitim Fakültesi Dergisi*, 10(12), 23-45.
- Döner, N. H., and Yeşilbalkan, Ö. U. (2024). Geçmişten geleceğe: Sağlıkta sanal gerçeklik ve uygulama alanları. *İzmir Katip Çelebi Üniversitesi Sağlık Bilimleri Fakültesi Dergisi*, 9(1), 143-149. <https://doi.org/10.61399/ikcusbfd.1188522>
- Erkoç, T., Baran, B., & Hamzaçebi, G. (2000). *Deprem nedir?* T.C. Bayındırlık ve İskan Bakanlığı Afet İşleri Genel Müdürlüğü.
- Herrman, H., Stewart, D. E., Diaz-Granados, N., Berger, E. L., Jackson, B., & Yuen T. (2011). What is resilience? *The Canadian Journal of Psychiatry*, 56(5), 258-265. doi:10.1177/070674371105600504
- Kafes, A.Y., Çiller, A., & Şakiroğlu, M. (2024) Deprem yaşamış bireylerin travma belirtilerine yönelik sanal gerçeklik destekli müdahale programı: bir etkililik çalışması. *Nöropsikiyatri Arşivi*, (61), 15-23. <https://doi.org/10.29399/npa.28568>
- Karabacak Ç., A. (2023). Deprem sonrası travma belirtileri, umut ve iyi oluş arasındaki ilişkinin incelenmesi. *TRT Akademi*, 8(18), 574-591. <https://doi.org/10.37679/trta.1275268>
- Karabulut, D. & Bekler, T. (2019). Doğal afetlerin çocuklar ve ergenler üzerindeki etkileri. *Doğal Afetler ve Çevre Dergisi*, 5(2), 368-376. <https://doi.org/10.21324/dacd.500356>
- Kılıç, N. C. (2021). Erzurum ili doğa olayları profili ve deprem tehlikesi. *Afet ve Risk Dergisi*, 61-83.
- Van der Kolk, B. A. (2019). *Beden kayıt tutar* (Çev. N. C. Maral) Nobel.
- Kurt, E. & Gülbahçe, A. (2019). Van depremini yaşayan öğrencilerin travma sonrası stres bozukluğu düzeylerinin incelenmesi. *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 23(3), 957-972.
- Morrison, J. (2019). *DSM 5'i kolaylaştıran klinisyenler için tanı rehberi*. Nobel.
- Myers, D. G. & Diener, E. (1995). Who is happy?. *Psychological Science*, 6(1), 10-19.
- Nakajima, Ş. (2012). Deprem ve sonrası psikolojisi. *Okmeydanı Tıp Dergisi*, 28(2), 150-155.
- Noyes, R. Jr. (1980). Attitude change following near-death experiences. *Psychiatry*, 43(3), 234-423.
- Özçetin, A., Maraş, A., Ataoğlu, A. & İçmeli, C. (2008). Deprem sonucu gelişen travma sonrası stres bozukluğu ile kişilik bozuklukları arasında ilişki. *Düzce Tıp Fakültesi Dergisi*, 10(2), 8-18.
- Özgen, F. & Aydın, H. (1999). Travma sonrası stres bozukluğu. *Klinik Psikiyatri*, 1, (2) 34-41.
- Özmen, S. & Ocakdan, U. B. (2022). Covid-19 pandemisinde hemşirelerin ölüm kaygısı düzeyinin psikolojik sağlamlığa etkisinin incelenmesi. *Süleyman Demirel Üniversitesi Vizyoner Dergisi*, 13(36), 1224-1236. <https://doi.org/10.21076/vizyoner.1101610>
- Öztekin, G. G. & Örki, H. (2023). Effects of depression, anxiety, and stress on disaster preparedness: Evidence from the February 6 Türkiye earthquakes. *Afet ve Risk Dergisi*, 6(4), 1332-1347.

- Parmaksız, İ. (2020). İyimserlik, özgecilik ve medeni durumun psikolojik dayanıklılık üzerindeki etkileri. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 48(1), 285-302. <https://doi.org/10.9779/pauefd.576186>
- Priebe, S., Grappasonni, I., Mari, M., Dewey, M., Petrelli, F. & Costa, A. (2009). Posttraumatic stress disorder six months after an earthquake: Findings from a community sample in a rural region in Italy. *Soc Psychiatry Psychiatr Epidemiol*, 44(5), 393-397.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology*, 57(6), 1069-1081. <https://doi.org/10.1037/0022-3514.57.6.1069>
- Sarman, A. & Tuncay, S. (2024). Büyük depremden 6 ay sonra: 2023 Türkiye depremiyle ilgili haberlerin ve diğer durumların ergenlerde kaygı düzeyi ve travma sonrası stres bozukluğu belirtileriyle ilişkisi. *Turkish Journal of Family Medicine and Primary Care (TJFMPC)*, 18(1), 81-92. <https://doi.org/10.21763/tjfm.1340469>
- Şahin, M. (2019). Korku, kaygı ve kaygı (Anksiyete) bozuklukları. *Avrasya Sosyal ve Ekonomi Araştırmaları Dergisi (ASEAD)*, 6(10), 117-135.
- Şakir, Ş. (2019). Türkiye’de afet yönetimi ve 2023 hedefleri. *Türk Deprem Araştırma Dergisi*, 1(2), 180-196. <https://doi.org/10.46464/tdad.600455>
- Tanhan, F. & Kayri, M. (2013). Deprem sonrası travma düzeyini belirleme ölçeğinin geçerlik ve güvenirlik çalışması. *Kuram ve Uygulamada Eğitim Bilimler*, 13(2), 1013-1025.
- Taşpınar, M. (2017) *Sosyal bilimlerde SPSS uygulamalı nicel veri analizi*. Pegem Akademi.
- Uğurluoğlu, D. & Erdem, R. (2019). Travma geçiren bireylerin spiritüel iyi oluşlarının travma sonrası büyümeleri üzerine etkisi. *Dokuz Eylül Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 21(3), 833-858. <https://doi.org/10.16953/deusosbil.507731>
- Ulusoy, M., Şahin, N. & Erkmen, H. (1998). Turkish version of the Beck anxiety inventory: psychometric properties. *Journal of Cognitive Psychotherapy: An International Quarterly*, 12(2), 163-172.
- Yardibi, N., Kucuktamer, T., & Ozcinar, Z. (2016). The evaluation of the mobbing behaviors faced by teachers in secondary schools. *International Journal of Educational Sciences*, 15(1-2), 304-312.
- Yıldız, B. & Akkoyun, A.Z. (2023). Deprem sonrası psikiyatrik destek. *İzmir Katip Çelebi Üniversitesi Sağlık Bilimleri Fakültesi Dergisi*, 8(2), 817-820.
- Zhang, Z., Shi, Z., Wang, L. & Liu, M. (2012). Posttraumatic stress disorder, anxiety and Depression among the elderly: A survey of the hard-hit areas a year after the Wenchuan earthquake. *Stress and Health*, 28(1), 61-68. [10.1002/smi.1403](https://doi.org/10.1002/smi.1403)



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*Araştırma makalesi/Research article*

# The Negative Effects of the Earthquake on Mothers of Children with Autism Spectrum Disorder

Depremi Otizm Spektrum Bozukluğu Olan Çocukların Anneleri Üzerindeki Olumsuz Etkileri

**Gül Kahveci\***  
**Nergüz Bulut Serin\*\***

## Abstract

There have always been events that dislocated the processes of life. The prevalence of experiencing a traumatic event in life has been variably reported from 21.4% to 89.6%. Traumatic events related to earthquakes, as experienced here, are among such experiences which are highly influencing in nature and inducing anxiety and stress. Such a condition may lead to a severe impairment in quality of life and psychosocial functioning. The aim of this research is to investigate the psychological effects of the earthquake on mothers of children with autism spectrum disorder(ASD) after the February 6 earthquake in Turkey. At the same time, the research aims to

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determine the negative situations and other psychological problems experienced by these mothers and to understand their coping strategies. This is a qualitative and hence descriptive research method. Data collection is through in-depth interviews and focus group discussions with the participants. In this way, one obtains an in-depth understanding and elaborate analysis of the emotional and cognitive processes the participants go through. While the special needs of children with autism spectrum disorder require constant care and supervision, increasing the mothers' stress levels in the long term and leading them to develop psychological problems, a large-scale traumatic event such as an earthquake causes an additional psychological burden by creating adverse effects on children's need for order and stability, damaging feelings of security and control of mothers, and increasing symptoms of post-traumatic stress. Finally, such support has the potential to help raise psychological resilience after a disaster.

**Keywords:** *autism spectrum disorder, traumatic events, reactions to earthquake*

## Öz

Travmatik olaylar, yaşamın doğal akışını bozan ve her zaman var olan durumlardır. Bireylerin yaşam serüveni içinde travmatik bir olayla karşılaşma yaygınlığı %21.4 ile %89.6 arasında değişmektedir. Deprem gibi travmatik olaylara tanık olmak, derinlemesine etkileyen, kaygı ve strese yol açan deneyimlerdir. Afetlere maruz kalmak, genel bir sıkıntı hali, endişe, korku, tekrarlayan rahatsız edici anılar ve depresyon belirtilerine yol açabilir. Bu durum, etkilenen bireylerin yaşam kalitesini ve psikososyal işlevselliğini ciddi şekilde bozabilir. Bu araştırmanın amacı, Türkiye'de yaşanan 6 şubat depremi sonrasında, depremin yarattığı olumsuzlukların çocukları otizm spektrum bozukluğuna (OSB) sahip anneler üzerindeki psikolojik etkilerini araştırmaktır. Aynı zamanda araştırma bu annelerin yaşadığı olumsuz durumları ve diğer psikolojik sorunlarını belirlemeyi ve bu sorunlarla başa çıkma stratejilerini anlamayı hedeflemektedir. Niteliksel ve betimleyici bir araştırma yöntemi kullanılmıştır. Veriler, katılımcılarla yapılan derinlemesine görüşmeler ve odak grup tartışmaları yoluyla toplanmıştır. Bu yöntem, katılımcıların yaşadığı duygusal ve bilişsel süreçlerin daha derinlemesine anlaşılmasını ve detaylı bir analiz yapılmasını sağlamıştır. Araştırma, otizm spektrum bozukluğuna sahip çocukları olan annelerin, travma sonrası stres belirtilerinde artma ve diğer ruh sağlığı sorunlarına karşı daha savunmasız olduğunu ortaya koymaktadır. Otizm spektrum bozukluğu olan çocukların özel gereksinimleri sürekli bakım ve gözetim gerektirdiğinden, annelerin uzun vadede stres düzeylerini artırarak psikolojik sorunlar yaşamalarına yol açarken, deprem gibi büyük çaplı bir travmatik olay, çocukların düzen ve istikrar gereksinimi üzerinde olumsuz etkiler yaratarak, annelerin güvenlik ve kontrol duygularını zedeleyerek, travma sonrası stres belirtilerini artırarak ek bir psikolojik yüke neden olmaktadır. Sonuç olarak, bu tür desteklerin sağlanması, afet sonrası psikolojik dayanıklılığı artırmada kritik bir rol oynayabilir.

**Anahtar sözcükler:** *otizm spektrum bozukluğu, travmatik olaylar, depreme tepkiler*

## Introduction

Traumatic events that disrupt the natural flow of life have always been a part of human experience. Research reports the prevalence of encountering a traumatic event in an individual's life journey to be between 21.4% and 89.6% (Perkonigg, Kessler, Storz & Wittchen, 2000). Moreover, scholars underline that witnessing a traumatic event such as an earthquake can cause anxiety and stress (Kar & Bastia, 2006). While anxiety and stress may initially seem like normal reactions, they can develop into more significant mental health problems if they persist over a long period of time. Being exposed to a disaster can lead to general distress, anxiety, fear, recurring disturbing memories, and symptoms of depression. This situation can severely impair the quality of life and psychosocial functioning of those affected (Liang, Cheng, Ruzek, & Liu, 2019). Research has identified post-traumatic stress disorder (PTSD) as the most common mental health issue following a disaster. Major depressive disorder follows closely, with anxiety disorders, substance abuse disorders involving alcohol and nicotine, and suicidal thoughts or attempts also being prevalent (Fergusson et al., 2014).

On 6 February 2023 two major earthquakes struck southern and eastern Turkey. These high-magnitude tremors, with moment magnitudes (Mw) of 7.8 and 7.5, occurred on the same day at 04:17 a.m. and 01:34 p.m., respectively. The powerful earthquakes severely affected a population of 15 million and a significant portion of the country's industrial sector. They originated along the highly active East Anatolian Fault Line with the epicenters located near the districts of Pazarcık and Elbistan in the province of Kahramanmaraş (AFAD 2023). These seismic events impacted an area of approximately 100,000 km<sup>2</sup>, spanning across 11 provinces in Turkey and affecting a geographical region with a population exceeding 15 million. The earthquakes caused extensive destruction, particularly in the provinces of Hatay and Kahramanmaraş, where more than 107,000 buildings either collapsed or sustained severe damage. As a result of these devastating earthquakes, official reports confirm the deaths of 50,000 individuals, with around 110,000 people injured (Coşkun 2023; AFAD 2023). The widespread devastation of buildings and infrastructure resulted in total economic losses estimated to exceed \$100 billion. This figure accounts for 9% of Turkey's projected national income for 2023 (Buyuk 2023; Evans 2023; Goren 2023) and is roughly six times higher than the financial impact of the 1999 Marmara Earthquake. A substantial share of these losses is attributed to the damage sustained by industrial facilities (Buyuk 2023).

### 1. Affective and cognitive risk perceptions of earthquakes

Humans experience a wide range of fundamental emotions, including happiness, fear, shame, embarrassment, anger, guilt, disgust, sadness, surprise, helplessness, terror, worry, panic, and enjoyment (Ekman, 1992). Among these, fear is a prominent affective risk perception (ARP) that disaster researchers often emphasize. ARP refers to the intrinsic fear of unfamiliar threats (Slovic, 2004). Another significant ARP frequently explored is panic. Groundbreaking research by Enrico L. Quarantelli revealed that extreme environmental hazards rarely induce panic (Quarantelli & Dynes, 1977). Panic is described as an intense ARP that triggers antisocial, irrational, or nonsocial fight-or-flight behaviors (Alexander,

2010). However, instances of panic are infrequent, with altruistic behaviors being far more common in disaster situations (Mawson, 2005; Raphael, 2005). In a study conducted by Prati, Catufi & Pietrantonio (2012), 38% of participants reported feeling fear, 9% helplessness and 8% worry. Furthermore, 7% of participants were terrified and 9% felt panicked. More recently, researchers have applied the Mood Adjective Checklist (Matthews et al., 1990) to assess emotional reactions during earthquakes, which included being optimistic, depressed, annoyed, nervous, fearful, relaxed, energetic, alert, and passive (Jon et al., 2016; Lindell et al., 2015; Lindell et al., 2016; Wei et al., 2017). Negative emotions, such as feeling depressed, annoyed, nervous, fearful, and alert, are particularly used to gauge ARP (Lindell, 2018).

## **2.Cognitive risk perceptions (CRP)**

CRP refers to how individuals evaluate threats during disaster situations (Arlikatti et al., 2007; Drabek, 1986; Huang et al., 2017; Lindell & Perry, 2004; Lindell et al., 2015; Mileti & Peek, 2000; Peek & Mileti, 2002; Sorensen, 2000; Tierney et al., 2001; Wu et al., 2015). In the context of earthquakes, CRP is typically assessed by asking individuals to measure their perceived risk of death, injury, property damage, and disruptions in their daily lives (Lindell & Prater, 2000). These disruptions may impact employment, local enterprises, transportation, vital public services, and social engagements (Jon et al., 2016; Lindell et al., 2015; Lindell et al., 2016; Wei et al., 2017).

## **3.Personality and personality disorders**

CRP is the analysis of perils from a human being point of view during crisis moments (Arlikatti et al., 2007; Drabek, 1986; Huang et al., 2017; Lindell & Perry, 2004; Lindell et al., 2015; Mileti & Peek, 2000; Peek & Mileti, 2002; Sorensen, 2000; Tierney et al., 2001; Wu et al., 2015). Certain studies characterize risk perception as the likelihood of experiencing events that might lead to psychological, bodily, or social disruptions (Lindell, 1994; Sorensen & White, 1980). More specifically, CRP refers to how individuals predict potential outcomes during disasters (Mileti & Fitzpatrick, 1992). In the context of earthquakes, CRP is typically assessed by asking individuals to measure their perceived risk of death, injury, property damage, and disruptions in daily life (Lindell & Prater, 2000). These disturbances may include impacts on employment, local businesses, transportation, essential public services, and social activities (Jon et al., 2016; Lindell et al., 2015; Lindell et al., 2016; Wei et al., 2017).

## **4. Personal characteristics**

*Toughness.* Toughness is the capacity to confront difficult situations directly, without succumbing to passivity or despair. It is akin to being resilient, hardy, and somewhat persistent. Sources of toughness frequently include faith, social support, and a strong sense of community and local pride. *Acceptance* involves acknowledging and embracing circumstances-whether from the past, present, or future-that are viewed as beyond control and inevitable, or part of one's destiny. Traditional wisdom suggests that accepting fate rather than resisting it can prevent various dysfunctions. *Self-reliance* is the belief that individuals should independently manage their own lives and fulfill their responsibilities without depending on others. The guiding



principle is: “Don’t wait for assistance or rely on others; take care of yourself.” Achieving self-reliance requires a certain level of psychological well-being or toughness, along with a strong community bond. *Patience and serenity* involve conducting oneself thoughtfully and with mindfulness, persisting in actions without acting hastily or becoming easily unsettled. These traits help maintain calmness in difficult situations, such as enduring aftershocks, and indicate mental strength or the absence of trauma, which contribute to psychological resilience.

People regularly face numerous challenges in daily life that cause stress, affecting their overall well-being. While some struggle to cope with them, others handle them in a healthy way. Psychological resilience is the ability to manage negative stimuli effectively and maintain well-being (Ungar & Theron, 2020)-the capacity to confront, adapt to, and sustain psychological health in the face of trauma, adversity, and challenges (Sisto et al., 2019). It reflects a balance between managing challenges and coping with stress, as psychological resilience is dynamic and evolves over time. Protective factors that lessen the adverse effects of stress-inducing risk factors contribute positively to psychological resilience. This resilience develops over time, and succeeding in overcoming challenges strengthens this capability. It plays a crucial role during life transitions. In summary, psychological resilience is essential for individuals to develop effective strategies, adapt successfully to their environment, and achieve success in various areas of their lives (Stewart, Reid & Mangham, 1997).

### **5.Experiences-related the earthquakes**

A study presents two distinct views on earthquake experiences: vulnerability and resilience (Blanchard-Boehm & Cook, 2004). The former is linked to a higher perception of household losses, while the latter implies that individuals with more earthquake experience tend to perceive lower levels of household loss. These contrasting views suggest that past disaster experiences carry different meanings for different individuals. As a result, even if researchers use similar survey methods to evaluate earthquake experiences, the outcomes may differ due to the unique ways in which individuals interpret their experiences.

### **6.The impact of intense stress on mental well-being**

The understanding of how intense stress impacts mental well-being has evolved significantly over time. Primarily, post-disaster psychology (see Reyes & Jacobs 2006) was initially focused on examining psychological disorders that emerged after disasters. However, since the 1990s, this perspective has broadened to acknowledge the wide array of human reactions to intense stress. Before this shift, the discourse surrounding trauma, particularly after the identification of PTSD, tended to overshadow this diversity (Reyes & Jacobs, 2006). Certain personality traits and previous experiences can increase a person’s vulnerability to PTSD. These traits include introversion, high levels of neuroticism (Davidson et al., 1989), and a history of psychiatric conditions (Hammond et al. 1993). Other contributing factors include the individual’s personal interpretation of the stressful event, feelings of guilt or survival guilt, a sense of entrapment, the event’s suddenness and unpredictability, and prior use of alcohol or drugs (Kaplan & Sadock). Traumatic events in early childhood, such as witnessing a parental divorce before the age of

10, personality traits like borderline, paranoid, antisocial, and addictive tendencies, as well as a family history of psychiatric disorders (Breslau et al., 1998; Kaplan & Sadock, 1998), can further increase the risk of developing PTSD. Additionally, pre-existing anxiety disorders and behavioral issues prior to the trauma can contribute to heightened vulnerability and can exacerbate the severity of PTSD (Resnick, Foy, Donahoe & Miller, 1989).

### **7. Effects of traumatic events**

The impact of traumatic events varies based on individual characteristics; even those experiencing the same event may react differently (Özçetin, Maraş, Ataoğlu, & İçmeli, 2008). Traumatic impacts occur in two phases: acute and post-traumatic. While post-acute reactions may be assessed as PTSD, not all traumatic events lead to it. A stressor is necessary but not sufficient for PTSD, though its likelihood increases with factors like accidents, sudden deaths, injuries, divorces, or job loss and irrational beliefs on an individual's life (Özgen & Aydın, 1999). Coping self-efficacy serves as a mediator in alleviating distress after a natural disaster (Benight, Swift, Sanger, Smith, & Zeppelin, 1999; Özgen & Aydın, 1999). When approaching coping from a broader perspective, it becomes clear that individual, familial, and communal functioning mechanisms are all part of the larger picture. The study emphasizes the "individual" dimension of this framework. However, isolating and analyzing the effects of various coping mechanisms independently is not entirely feasible. The conscious or unconscious process of balancing inwardly and outwardly focused actions enables individuals to effectively integrate accommodative and assimilative strategies. Especially in prolonged challenging circumstances, the combination of acceptance, patience, and resilience supports maintaining optimism and the ability to act. (Hamengku Buwono, 2008; Heckhausen, 2002; Hobfoll, Schroder, Wells, & Malek, 2002; Hobfoll, 2002).

### **8. Environmental signals**

Environmental signals are pivotal in influencing Affective Risk Perceptions (ARPs) and Physical Affective Distress (PADs) during earthquakes, as demonstrated by the 2018 Hualien Earthquake. For example, powerful and intense shaking often triggers heightened fear in individuals. This connection between the intensity of shaking and fear is supported by Alexander's (1990) research. Various studies, such as those by Alexander (1990), Arnold, Durkin, and Whitaker (1982), Quarantelli (1976), and Takuma (1972), have demonstrated that severe tremors significantly influence individuals' willingness to evacuate buildings. Conversely, frequent but low-intensity tremors often cause a freeze response, where individuals pause their activities to assess the severity of the shaking before taking further action. Notably, our research uncovered an unexpected factor that increases anxiety: the sound of subterranean rumbling. The purpose of this study is to explore the psychological impacts of large-scale traumatic events, particularly earthquakes, on mothers of children with ASD. The research seeks to determine the conditions and other mental health issues these mothers experience and understand the strategies they use to cope with these issues. Additionally, it seeks to determine the levels of psychological resilience among these mothers and the factors influencing these levels.

Earthquakes directly affect individuals' psychological health. The sudden feelings of fear, panic, and helplessness experienced during an earthquake can disrupt individuals' mental balance. After the earthquake, losses and uncertainty can lead to long-term psychological disorders. Individuals may be more sensitive to such traumatic events. Earthquakes also profoundly impact social structures. Situations such as families losing their homes, disconnecting from their social circles, and the weakening of community support networks negatively affect individuals' social development. Additionally, cognitive development can be adversely affected by earthquakes. High stress levels are reported to negatively impact individuals' cognitive functions, particularly memory and problem-solving skills (Sönmez, 2022). Vulnerable groups, in particular, require more support in coping with these cognitive challenges. Issues such as learning difficulties and attention deficits are commonly observed after earthquakes.

Earthquakes can have deep and lasting effects on individuals' psychological, physical, social, and cognitive development. Research conducted in Türkiye has thoroughly documented the negative impacts of earthquakes in these areas (Şahin et al., 2007; Yıldız and Öztürk, 2023). The major earthquakes experienced in Turkey highlight the need for increased awareness in this area and the development of disaster management strategies that address the needs of specific groups. In this context, research involving vulnerable groups, such as mothers of children with ASD, is thought to contribute to the development of strategies that will help individuals become more resilient to disasters. In conclusion, this research aims to understand the profound effects of natural disasters, particularly earthquakes, on the lives of individuals in vulnerable groups, thereby supporting future research to cope with these effects.

### **Material and method**

The research employed a qualitative interpretative descriptive design using focus groups (Krueger & Casey, 2015; Thorne, 2016). Focus groups, as a research method, gather information through group discussions on a particular subject selected by the researcher. This method includes three main aspects: it is explicitly a data collection method, it relies on group discussion as the source of data, and it involves the researcher actively facilitating the group discussion to gather data (Morgan, 1996). Ethical permissions were obtained within the scope of the research.

In-depth interviewing and focus groups are the widely applicable qualitative methods in terms of choice for data gathering. An in-depth interview is a one-on-one conversation between the researcher and the participant, which could either be unstructured or semi-structured (Lambert, S. D., & Loiselle, 2008). The idea behind this is to find out from the participant thoughts, feelings, experiences, and perspectives on the particular topic of interest in great detail. From this kind of method, more personal and detailed responses can be gathered since the focus is on the collection of data individually (Johnstone, 2017). In an in-depth interview, the interviewer delves into the participant's responses to elicit more of his feelings or opinions. A focus group usually represents a small population: 6-10 participants who deliberates on an issue guided by a moderator, and therefore, rich data can be collected from interactions between participants. Individuals respond not only to questions posed by

a moderator but also to comments made by others, which may have the effect of sparking a range of opinions that pertain to relevance of discussion points. (Rabiee, 2004).

The validity of focus groups reside in recognition of group dynamics as well as how people mutually develop their view on an issue. Both techniques thus serve different purposes in data collection (Gill, Stewart, Treasure & Chadwick, 2008). While in-depth interviews allow us to gain insight with a personal touch into individual experiences, focus groups develop a person's understanding of shared views and the power of group dynamics. The prospective integration of these methods will definitely offer an all-round view for the researcher of the research topic from both the individual and collective perspective, thus giving him or her richer and more varied sets of data.

The following are some of the key reasons for conducting the study in Ankara: First of all, the earthquakes centred on 6 February 2023 in Kahramanmaraş, affected a very large geographical area and caused many families to migrate. Individuals with special needs, especially families of children with ASD, migrated to big cities like Ankara in order to have access to a safe environment and health services. In this respect, Ankara became an accumulation point for the families who migrated after the earthquake. Ankara is a city hosting many universities and research centres. This situation made the study easier in logistic respects. Moreover, academic resources, health experts, and private educational institutions in Ankara provided some advantages both in the data collection process and in reaching the participants. The existence of special educational institutions—especially for children with ASD—facilitated the communication with such a family and increased participation in the study. The fact that Ankara is a migratory city and it has high demographic diversity allows the psychological processes experienced by the mothers affected by the earthquake to be examined from a broader perspective. These factors therefore provide the reasons for carrying out the research in Ankara and give the study considerable scientific merit.

### **Participants, data collection, interview guide and data analysis**

Participants were chosen according to the following criteria: (1) families with a child diagnosed with ASD who had experienced the earthquake sequence (with magnitudes of 7.8 and 7.5) that struck southern and eastern Turkey on 6 February 2023; (2) Turkish-speaking families who had relocated to Ankara after the earthquake; and (3) parents who were either married or divorced and living in separate homes. These criteria ensured that the study included both commonality (families with an autistic child) and variability (different family structures) (Morgan, 1996). The “scope” of this research encompasses a private special education school located in Ankara. The participants consist of mothers of children diagnosed with ASD, coming from various central districts of Ankara, whose children are enrolled at this special education institution (Table 1).

The data collection method employed was the focus group technique (Wilson, 1997). After receiving verbal consent from the mothers, they signed the consent form during the group session held at the special education school, with their responses being recorded by the teachers. Mothers of children with autism who volunteered to participate were included in the focus groups (n =

37). The group meetings were conducted at the special education center at different intervals. To facilitate participation, sessions were scheduled during the mothers' visits to the school, with each session including at least two and at most six mothers. Each session was led by a moderator and assisted by teachers (each session was led by a moderator (first researcher) and assisted by teachers). The sessions were led by a moderator, a research specialist and graduate student with expertise in facilitating focus groups. An assistant moderator, also a graduate student, was responsible for taking notes to complement the audio recordings. At the conclusion of each session, a summary was provided to confirm the participants' statements, and their responses were reviewed. The topic encouraged in-depth discussion, and the smaller group size allowed participants to express themselves more freely, leading to the collection of more accurate data. Each focus group session lasted 2x45 minutes, with all sessions audio recorded.

The interview guide comprised both yes/no and open-ended questions. Throughout the sessions, mothers were encouraged to share further observations with us. The structure of the study, along with its components, followed the framework established by Krueger and Casey (2015), organizing the sessions into stages: opening, introduction, transition, key, and closing questions. Examples of key questions used in the study are provided in the tables below. To avoid repetition, references are made to the tables and table numbers instead of including the questions directly. Tables include socio-demographic data of participants (Table 1), data related to traumatic events (Table 2), individual data following traumatic events (Table 3), and psychological resilience (Table 4). A thematic content analysis was conducted (Neuendorf, 2018). To begin, the audio recordings were transcribed word-for-word (Rousseau et al., 2002). Two authors independently validated the coding process, reaching a 78% agreement rate. This level of agreement was partly due to some overlap in the codes. The transcriptions were then coded using the Nvivo software (QSR International, 2018). Following this, the first and second authors carried out data reduction based on the coding. Throughout this stage, consistency between the researchers was maintained, and key themes along with sub-themes were identified (Neuendorf, 2018). For example, during the initial reduction phase (R1), no data were reassigned to new codes, as consistency was ensured by generating a table that included the initial codes from verbatim quotations.

### **Limitations**

After the earthquake, families who were unable to receive sufficient support in their area left to stay with family members living in other regions. Among this group, families with children diagnosed with ASD who were relocated to stay with relatives in Ankara were our participants. Accordingly, this study was carried out specifically in districts of Ankara reflects only a small segment of the Turkish population. Furthermore, due to the diverse nature of ASD profiles, children's needs differ based on the severity of the disorder and the specific symptoms they exhibit (Charman, 2014; Fountain et al., 2012; Nazeer & Ghaziuddin, 2012; Gledhill & Currie, 2020). As a result, it is crucial to extend the research to a larger participant group to ensure more comprehensive findings.

**Table 1:** Socio-demographic data of participants (mothers) at the time of the interviews.

Socio-demographic variables	N	Mean (range)	%
	37		
Age (years)		42.9 (21–61)	
Employment status (paid employment)	16		43.3
Employment status (unemployed)	21		56.7
Type of accommodation (apartment)	35		95
Type of accommodation (house)	2		5
Number of children			
1	2		5
2	28		76
3	7		19
Existing Mental Chronic Illness Diagnosis	12		32
Regular medication use	15		41
Smoking habits	22		60
Presence of psychiatric disorders in first or second-degree relatives	9		24

Table 1 contains the socio-demographic data of the participants (mothers). Each row shows the distribution and percentage of a specific socio-demographic variable. Here are the explanations of the findings for each row:

There are a total of 37 participants. The average age of the participants is 42.9 years, with an age range from 21 to 61 years. showing the age distribution and average age of the participants. In terms of employment status, 16 participants (43.3%) are employed, indicating that approximately half of the participants are actively working, while 21 participants (56.7%) are unemployed, indicating that the majority of the participants are not working. Regarding the type of residence, 35 participants (95%) live in apartments, showing that the vast majority of the participants reside in apartments, while 2 participants (5%) live in detached houses, indicating that living in houses other than apartments is rare.

In terms of the number of children, 2 participants (5%) have 1 child, 28 participants (76%) have 2 children, and 7 participants (19%) have 3 children, indicating that most participants have two children. Regarding existing mental chronic illness diagnoses, 12 participants (32%) have been diagnosed with a chronic mental illness, indicating that about one-third of the participants have a chronic mental condition. Additionally, 15 participants (41%) regularly take medication, showing that a significant portion of the participants use medication regularly. In terms of smoking habits, 22 participants (60%) smoke, indicating that the majority of the participants are smokers. Lastly, 9 participants (24%) reported having first or second-degree relatives with psychiatric disorders, showing that a quarter of the participants have relatives with psychiatric conditions.

**Table 2:** Data related to traumatic events.

	(n)	Percentage (%)
<b>Level of Fear During the Earthquake</b>		
None or very little	0	0
Moderate	1	2.7
Very high	36	97.3
<b>Experiencing Fear of Death During the Earthquake</b>		
Yes	32	86.5
No	5	13.5
<b>Injury During the Earthquake</b>		
Yes	25	67.6
No	12	32.4
<b>Losing a Loved One During the Earthquake</b>		
Yes	37	100
No	0	0
<b>A Loved One Being Injured During the Earthquake</b>		
Yes	37	100
No	0	0
<b>Experiencing Financial Loss During the Earthquake</b>		
Yes	37	100
No	0	0
<b>Experiencing Job Loss During the Earthquake</b>		
Yes	36	97.3
No	1	2.7
<b>Damage Status of Your Home</b>		
Undamaged	0	0
Sustained minor damage	2	5.4
Sustained moderate damage	5	13.5
Sustained severe damage	30	81.1

Table 2 contains data related to traumatic events experienced during and after the earthquake. Each row shows the distribution and percentage of a specific situation.

**Level of fear during the earthquake:** Moderate: Only 1 person (2.7%) experienced a moderate level of fear. Very high: 36 people (97.3%) experienced a very high level of fear. **Experiencing fear of death during the earthquake:** Yes: 32 people (86.5%) experienced fear of death during the earthquake. No: 5 people (13.5%) did not experience fear of death. **Injury during the earthquake:** Yes: 25 people (67.6%) were injured during the earthquake. No: 12 people (32.4%) were not injured. **Losing a loved one during the earthquake:** Yes: 37 people (100%) lost a loved one during the earthquake. **A loved one being injured during the earthquake:** Yes: 37 people (100%) reported that a loved one was injured



during the earthquake. **Experiencing financial loss during the earthquake:** Yes: 37 people (100%) experienced financial loss during the earthquake. **Experiencing job loss during the earthquake:** Yes: 36 people (97.3%) experienced job loss during the earthquake. This indicates that economic activities were severely affected after the earthquake. No: 1 person (2.7%) did not experience job loss. **Damage status of your home:** Minor damage: The homes of 2 people (5.4%) sustained minor damage. Moderate damage: The homes of 5 people (13.5%) sustained moderate damage. Severe damage: The homes of 30 people (81.1%) sustained severe damage.

**Table 3:** Individual data following traumatic events (Behavioral problems: None or mild, Moderate, and Severe)

<b>Behavioral Problems</b>	<b>None or mild</b>	<b>Moderate</b>	<b>Severe</b>
I am experiencing a loss of appetite	3	17	17
I wake up suddenly from my sleep and have difficulty falling back asleep.	0	24	13
I sleep less.	13	18	6
I have become more angry/irritable.	8	16	13
I have nightmares.	0	7	30
I cannot enter enclosed spaces for fear of an earthquake.	9	15	13
<b>Emotional constraint</b>			
I have lost my sense of trust in the future.	24	11	2
Life feels meaningless to me now.	12	24	1
My desire to live has decreased after what I experienced.	31	6	0
I feel very helpless/powerless.	8	25	4
<b>Emotional</b>			
I appreciate the value of my life more.	0	6	31
I have become very emotional/cry for no reason	0	9	28
<b>Cognitive State</b>			
I worry about my children/ parents/acquaintances/ friends.	0	0	37
I am anxious with the constant thought that an earthquake might happen at any moment.	0	10	27
Images of the earthquake keep appearing in my mind. I am worried about the future.	0	34	3
I am worried about the future.	0	8	29

**Table 3** assesses the behavioral, emotional, and cognitive states individuals experience following a traumatic event. Each row presents the intensity and distribution of different symptoms. The explanations for the findings in each row are as follows:

**Loss of Appetite:** 3 individuals do not experience or experience mild loss of appetite. 17 individuals experience moderate loss of appetite. 17 individuals experience severe loss of appetite. **Waking Up Suddenly and Difficulty Falling Asleep:** 24 individuals experience this problem moderately. 13 individuals experience this problem severely. **Sleeping Less:** 13 individuals experience this problem mildly. 18 individuals experience this problem moderately. 6 individuals experience this problem severely. **Increased Anger/Irritability:** 8 individuals feel mildly angry or irritable. 16 individuals feel moderately angry or irritable. 13 individuals feel severely angry or irritable. **Nightmares:** 7 individuals experience moderate nightmares. 30 individuals experience severe nightmares. **Fear of entering enclosed spaces due to earthquake:** 9 individuals experience this fear mildly. 15 individuals experience this fear moderately. 13 individuals experience this fear severely. **Loss of trust in the future:** 24 individuals experience mild loss of trust in the future. 11 individuals experience moderate loss of trust in the future. 2 individuals experience severe loss of trust in the future. **Feeling that life is meaningless:** 12 individuals experience this feeling mildly. 24 individuals experience this feeling moderately. 1 individual experiences this feeling severely. **Decreased desire to live after the experience:** 31 individuals experience this feeling mildly. 6 individuals experience this feeling moderately. **Feeling very helpless/powerless:** 8 individuals feel mildly helpless or powerless. 25 individuals feel moderately helpless or powerless. 4 individuals feel severely helpless or powerless. **Greater appreciation for life:** 6 individuals experience this feeling moderately. 31 individuals experience this feeling severely. **Increased emotionality/crying without reason:** 9 individuals experience this feeling moderately. 28 individuals experience this feeling severely. **Worrying about children/parents/acquaintances/friends:** All participants experience this worry severely. **Anxious about the possibility of an earthquake at any moment:** 10 individuals experience this anxiety moderately. 27 individuals experience this anxiety severely. **Recurring images of the earthquake:** 34 individuals experience this moderately. 3 individuals experience this severely. **Worrying about the future:** 8 individuals experience this worry mildly. 29 individuals experience this worry moderately.

**Table 4:** Psychological resilience

Psychological resilience Questions	(n) Yes/No	Extended Questions: Answers were Grouped into Three Different Levels ( <b>mild, moderate severe level</b> )
1. I can handle everything that comes my way.	Y: 0 N: 37	1. What methods do you prefer when dealing with difficulties?
2. When I encounter problems, I try to see the humorous side of them.	Y: 2 N: 35	2. What techniques do you use to see the humorous side of problems?
3. Having to deal with stress can make me stronger.	Y: 6 N: 31	3. How do you turn dealing with stress into an opportunity for growth?
4. I quickly return to normal after illness, injury, or similar difficulties.	Y: 3 N: 34	4. What do you do to quickly return to normal after illness or injury?

5. I believe that I will reach my goals despite any obstacles	Y: 12 N: 25	5. How do you maintain your belief that you will achieve your goals when faced with obstacles?
6. I can maintain my focus and think clearly under stress.	Y: 0 N: 37	6. What methods do you use to maintain your focus and prevent distractions under stress?
7. I don't give up easily in the face of failure.	Y: 6 N: 31	7. What sources of motivation do you rely on to not give up when faced with failure?
8. I see myself as a strong person when it comes to dealing with life's challenges.	Y: 6 N: 31	8. What factors make you feel strong while dealing with life's challenges?
9. I can cope with unpleasant and painful emotions such as sadness, fear, and anger.	Y: 12 N: 25	9. What are your ways of coping with negative emotions such as sadness, fear, and anger?

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The responses to the extended questions grouped into mild, moderate and severe levels are as follows:

Extended Question 1: What strategies do you prefer when handling challenges?  
Third Level: "I found it very difficult to manage the challenges I encountered. Most of the time, I felt unsure about what to do and experienced a sense of powerlessness. Although I made numerous attempts to solve the problems, I often failed. I was reluctant to seek help, and as a result, remained stressed. Eventually, I realized that I couldn't manage these situations on my own and needed support to move forward" - Participant 5

Extended Question 2: How do you use humor to approach problems?

Second Level: "When facing challenges, I tried to use humor as a tool. I would make jokes and adopt a positive outlook, like Pollyanna, in order to lighten the mood because I didn't want my children to be negatively impacted. Sometimes, talking things over with friends helped reduce my stress. Nonetheless, it was not always facile, and there were instances when my morale diminished" - Participant 8.

Extended Question 3. How did you make dealing with stress an opportunity for growth?

First Level: "While dealing with stress, I turned the situation into an opportunity for growth. I trusted myself in stressful situations and realized these experiences made me resilient. I developed strategies to overcome difficulties and learned something from each one. This helped me develop my problem-solving skills and emotional strength" - Participant 2.

Second Level: "I have been in a stressful situation where I tried to turn the situation into an opportunity for growth. First of all, through trying various ways of handling the stress, I found out which ones work best for me. These made me much better when it comes to handling stressful situations and thus making me stronger. However, sometimes it was hard for me to overcome some problems, and I needed somebody's help" - Participant 5.

Third Level: “When facing the source of stress, I could hardly rethink the problem and make an opportunity out of it, repeatedly failing to cope with the stressful situation on time. I didn’t get that ‘what doesn’t kill us makes us stronger’ feeling afterwards. Difficulties overwhelmed me, and I often felt helpless. This made the stress affect me even more” - Participant 12.

Extended Question 4. What do you do to get back quickly after falling sick or getting injured?

First Level: “What I do to get back quickly after falling sick or getting injured is to have faith in myself and to take certain steps. Firstly, I followed the doctor’s advice and treatment plans very strictly. To me, listening to my body and respecting its need for rest is of foremost importance. I was also optimistic and focused on my recovery, having all the patience and determination it took to heal” - Participant 4.

Second Level: “The methods I used to get back to normal as soon as possible after illness or injury are many. First of all, I went for professional healthcare services and carefully followed the treatment process. Meanwhile, I gradually tried to return to my routine life and strengthened myself with physical activities. During this process, I stayed in the company of loved ones and sought support to maintain my morale. Nevertheless, the slow pace of recovery sometimes dimmed my spirits” - Participant 5.

Third Level: “I found it hard to return to normal after illness or injury. I went through the treatment process but usually felt it was slow and painful. At times, I felt helpless and low in morale. I couldn’t take the necessary steps for recovery or maintain my motivation. This made the process longer and more complicated for me” - Participant 12.

Extended Question 5. How do you maintain your belief that you will achieve your goals when faced with obstacles?

First Level: “With regard to believing that my goals are attainable when obstacles get in the way, I relied on myself and maintained a positive attitude. With each obstacle, I took it as an opportunity to learn more and improve my problem-solving skills. Also, I employed self-rewarding to maintain high motivation through celebration of small successes. With each step, I felt closer to the goal. Determined and disciplined, I took all measures necessary to reach my goals” - Participant 31.

Second Level: “Once obstacles showed up, I applied some strategies to maintain belief in achieving my goals. First, I reflected on my goals and broke them into smaller parts to motivate myself by achieving them. I found alternative ways to overcome obstacles and learned to be flexible. I sought help from people around me by sharing my experiences to boost my morale. However, sometimes it was hard to believe, and I had to make extra effort” - Participant 5.

Third Level: “It was very challenging for me to believe in reaching my objectives amidst many obstacles. Often, obstacles frustrated me, and I felt helpless. The motivation required to achieve my goals eluded me, and I nearly gave up many times. I also felt incapable of dealing with problems, which significantly undermined my belief in reaching my goals” - Participant 12.

Extended Question 6. What methods do you use to maintain your focus and prevent distractions under stress?

Third Level: “When stressed, maintaining concentration was challenging for me. In stressful situations, I often panicked, and my mind became foggy. I had great difficulty focusing and almost couldn’t clear my head. I couldn’t find effective ways to manage stress, which made the situation even worse” - Participant 5.

Extended Question 7. What sources of motivation do you rely on to not give up when faced with failure?

First Level: “In case of failures, to avoid giving up, I relied on my self-confidence and goals. I accepted that each failure is a learning opportunity and tried to learn from it. By recalling past successes, I motivated myself to try again with a positive attitude. The support of my family and friends also gave me great strength during this process” - Participant 31.

Second Level: “I had various sources of motivation to avoid giving up when faced with failure. First, setting small, achievable goals helped. Achieving these goals motivated me. I read inspiring stories and success tales, which gave me the courage to try again. I also viewed failures as temporary and just hurdles to my ultimate goal. However, sometimes I struggled to maintain my morale and had to make extra efforts” - Participant 12.

Third Level: “Not giving up when faced with failure was often very challenging. Failure frequently affected me deeply, and I struggled to find motivation. Trying again required more energy than I had. I hesitated to seek support, which made the situation even harder. As a result, dealing with failure was very stressful and demoralizing for me” - Participant 33.

Elaborated Question 8: What elements contribute to your resilience while confronting life’s challenges?

Primary Level: “The principal factors that instill strength in me when confronting life’s challenges are my self-assurance and previous achievements.” I concentrated on the competencies and experiences that enabled me to surmount each challenge. The assistance I got from my family and friends provided me with both strength and inspiration. I may not have achieved as much alone. Moreover, through some strategies for releasing tension, such as meditation and physical activity, I maintained my psychological and physical health” - Participant 31.

Second Level: “Various factors helped me to be resilient in fighting the daily stresses of life.” First of all, I had more clearly defined my goals and values and held on to them firmly. My family and friends provided the support system that was much needed during these difficult times and boosted my morale. I drew strength from what others had gone through and from the stories of strong people. However, sometimes I could not feel strong and needed to work harder to maintain my strength. Participant Nine Third Order: “Almost every night, I struggled to stay strong facing the darkest side of my life.” The fighting against obstacles drained me, and I felt overwhelmed most of the time. I could hardly find the sources of inspiration that would let me enable the sense of empowerment. “I never sought help,

thus, I felt isolated and vulnerable. The work of keeping life's challenges did become too exhausting and degrading task for me” - Participant 27.

Extended Question 8. What are the things that make you feel strong to face life's various challenges?

First Level: “Some of the factors that made me feel strong to face the various challenges of life were my self-confidence and my past achievements. I focused on the skills and experiences I had to overcome every difficulty. The support from family and friends gave me strength and motivation. I also maintained psychological and physical fitness through coping strategies like meditation and exercise” - Participant 31.

Second Level: “I had reasons that made me strong in fighting life's battles. Firstly, I stated my goals and values and committed to them. Family and friends comprised my support system and were always there for me whenever difficulties struck, even boosting my morale. Other people's stories and experiences also made me feel strong during tough times. However, at other times, when I didn't feel strong, I had to put in extra effort” - Participant 9.

Third Level: “Throughout life's problems, I have often felt weak. Coping with struggles has really tired me out, and I frequently felt helpless. I couldn't find any sources of motivation that could help me feel strong. I didn't ask for support, which made me feel lonelier and weaker. For me, overcoming obstacles was too stressful and a demoralizing process” - Participant 27.

Extended Question 9. What are your ways of coping with negative emotions such as sadness, fear, and anger?

First Level: “While trying to get over the negative feelings of sadness, fear, and anger, I believed in my capability and built up a few coping strategies. First of all, without repressing these emotions, I accepted them and tried to analyze them. Meditation and breathing exercises helped me to calm down. Additionally, I engaged in physical activities and exercise to reduce the impact of these feelings. I called my friends and family to talk and share my feelings, which helped me feel relieved and stronger” - Participant 31.

Second Level: “I used a few methods to cope with negative emotions such as sadness, fear, and anger. First of all, I expressed these emotions by writing them down and keeping a journal. In addition, I turned to my hobbies and things that interested me to distract myself and relax. I sought professional help and attended therapy to deal with these emotions. Nonetheless, sometimes these emotions overwhelmed me, requiring additional support” - Participant 5.

Third Level: “I found it very challenging to handle or deal with negative emotions like sadness, fear, and anger. Most of the time, I remained under the influence of such emotions and often felt helpless. I struggled to develop coping mechanisms and was frequently reluctant to seek support. This made the situation very challenging and demoralizing for me, and I failed to overcome these emotions” - Participant 27.

## **Discussion**

Results from Table 1 and Table 2 could be interpreted to mean that:

### **Socio-demographic data**

This table provides a detailed analysis of the socio-demographic characteristics and health status of the participants. Such data offer valuable insights into the sample profile of the study and help assess how the results relate to the broader population. The total number of participants is 37, which defines the sample size and gives an indication of the generalizability of the data. A sample size of 37 is considered sufficient for representing a specific community. The average age of participants is 42.9, with a range from 21 to 61 years, covering a broad age spectrum. This distribution helps understand how different age groups respond to traumatic events, with the majority of participants being middle-aged, suggesting greater life experience. Regarding employment, 43.3% of participants are employed, while 56.7% are unemployed, indicating significant economic challenges that may amplify the impact of traumatic experiences. Most participants (95%) live in apartment buildings, with only 5% residing in detached houses, suggesting that the majority live in densely populated urban areas, potentially increasing vulnerability during events like earthquakes. In terms of family size, 5% of participants have one child, 76% have two children, and 19% have three children. The predominance of families with two children highlights larger family units, which could offer insights into how traumatic events affect family dynamics, particularly in relation to children. Furthermore, 32% of participants have been diagnosed with a chronic mental illness, emphasizing the importance of psychological support, as existing mental health issues may complicate responses to trauma. Regular medication use is reported by 41% of participants, indicating that a significant portion of them are undergoing continuous medical treatment, likely for chronic health conditions. Smoking habits are prevalent among 60% of the participants, which may suggest that smoking is used as a coping mechanism for stress. Additionally, 24% of participants reported having first or second-degree relatives with psychiatric disorders, highlighting the influence of family history on individual responses to traumatic events. These findings provide a comprehensive profile of the participants, which is crucial for planning effective post-disaster support and intervention programs.

### **Data on traumatic events**

This table describes traumatic events experienced during and after the earthquake and how participants rated their feelings about what happened. The study revealed that 97.3% of participants experienced extreme fear during the earthquake, while only 2.7% reported moderate fear. This suggests that the level of fear and panic during the earthquake was exceptionally high, highlighting the profound psychological impact of such traumatic events. Additionally, 86.5% of participants felt a fear of death during the earthquake, while 13.5% did not. This high percentage of those fearing death emphasizes the lethal nature of the event.

Regarding physical injuries, 67.6% of participants were injured during the earthquake, while 32.4% were not. This demonstrates the significant physical threat posed by the disaster. Furthermore, 100% of participants reported the loss of a loved one, which underscores the



immense scale of destruction and personal loss, leading to widespread societal trauma. Similarly, all participants (100%) reported that a close family member was injured during the earthquake, indicating the extensive impact of injuries within families. Lastly, all participants experienced financial loss due to the earthquake, further compounding the overall traumatic burden.

### **Individual data following traumatic events**

Table 3 provides a comprehensive overview of the various behavioral, emotional, and cognitive issues individuals experience after a traumatic event. The data reveal the wide-ranging impacts of trauma on individuals' lives.

**Behavioral and Emotional Effects:** The majority of individuals report experiencing behavioral issues such as loss of appetite, sleep disturbances, anger, and nightmares. Additionally, emotional states like loss of trust in the future, loss of meaning in life, and feelings of helplessness are commonly observed. Notably, symptoms such as a decreased desire to live and feelings of helplessness highlight the profound psychological impacts of trauma.

**Cognitive Effects:** Many participants experience cognitive issues such as flashbacks (re-experiencing the traumatic event) and a constant state of anxiety. The recurring images of the earthquake and concerns about the future clearly illustrate the impact of trauma on mental processes.

Table 4 shows that the participants generally have low levels of psychological resilience and find it challenging to cope with difficulties. Most participants feel inadequate and helpless in stressful situations and when facing challenges, indicating a significant need for additional support and intervention to improve psychological resilience.

**Self-Confidence and Coping Strategies:** A majority of the participants report lacking self-confidence and having insufficient skills to cope with difficulties. Notably, none believe they can handle everything, and everyone struggles to maintain focus under stress, highlighting a critical need for support in these areas. **Stress Management and Empowerment:** The lack of participants who see opportunities for empowerment while dealing with stress suggests a need for more effective stress management and empowerment strategies. Teaching stress management techniques and providing supportive interventions can help individuals manage stress more effectively. **Coping with Negative Emotions:** While some individuals have developed the ability to cope with negative emotions such as sadness, fear, and anger, the majority find this challenging. This highlights the need to develop emotional resilience and effective emotional management skills.

### **Conclusion**

Throughout life, it is likely that we will encounter many traumatic events, and natural disasters hold a significant place among these events. Earthquakes, in particular, are highly traumatizing natural disasters due to their unpredictability, wide impact area, and immense destructive power. Considering their effects on individuals, earthquakes can be said to be extremely traumatizing. The prevalence of PTSD following earthquakes has been reported to range from 3% to 87%

across groups with various cultural and socio-demographic characteristics (Aker, 2006). Explaining this variability solely through methodological differences is challenging. These data reveal that large-scale traumatic events like earthquakes have substantial effects on individuals' psychological and economic conditions. While socio-demographic data provide information about the participants' general health and living conditions, data related to traumatic events highlight the fear, losses, and economic issues caused by the earthquake. Such data play a crucial role in planning psychological support and assistance programs post-disaster. Utilizing this information during the post-disaster recovery process can help in implementing more effective and targeted interventions. Specifically, the prevalence of chronic mental illnesses and regular medication use, the high rate of smoking, and the presence of psychiatric disorders among close relatives highlight the significant need for psychological support in this community. Similarly, the intense fear and fear of death experienced during the earthquake, along with the prevalence of injuries and losses, financial losses, and job losses, underscore the necessity of economic and social support mechanisms post-disaster.

A thesis study conducted by Adana Medical Faculty evaluated the levels of (PTSD) and psychological resilience in adults following an earthquake (Mahmut, 2023). The research included 253 participants. In the study, the percentage of those who had injured relatives during the earthquake was reported as 19%. However, for mothers of children with (ASD), this figure was 100%. The percentage of those who lost a relative during the earthquake was 17.4%, while for mothers of children with ASD, it was again 100%. Financial loss was experienced by 22.9% of the participants, compared to 100% for mothers of children with ASD. Additionally, 78.3% of participants were displaced from their homes, whereas this number was 100% for mothers of children with ASD. Families were forced to relocate to a different city. Common findings in both studies are as follows: **Traumatic stress and emotional responses:** Both mothers of children with ASD and adult individuals experienced intense traumatic stress and emotional reactions after the earthquake. Fear of death, loss of trust in the future, and feelings of helplessness were prevalent in both groups. **Sleep problems:** Sleep disorders were prominent in both groups. Sudden awakenings from sleep, difficulty falling asleep, and nightmares were commonly reported. **Psychological resilience:** As the levels of psychological resilience increased in adult individuals, their PTSD scores decreased. Although quantitative data in the form of PTSD scores were not provided for mothers of children with ASD, it was observed that they experienced intense stress.

This comparison highlights that the traumatic stress and emotional responses experienced by mothers of children with (ASD) after the earthquake are similar to those of the general adult population, while also exhibiting some specific differences. Both groups require significant psychological intervention and support programs. For mothers of children with ASD, it is crucial to develop special support programs that take into account their concerns for their children. These findings indicate that post-disaster mental health policies and support services need to be planned in a more targeted and effective manner. When compared with another study from 2024 (Orçan & Karaaziz, 2024), parallels were identified in the following findings. In terms of (PTSD) and mental health, both studies observed PTSD prevalently.

It was noted that mothers of children with (ASD) commonly have chronic mental health conditions, while PTSD symptoms were frequently observed among adults who experienced the earthquake. This underscores the impact of traumatic events on mental health. While 32% of mothers of children with ASD have been diagnosed with chronic mental illnesses, PTSD symptoms are prevalent among adults who experienced the earthquake, with women being more affected than men. Examining the socio-demographic data, both studies focused on the socio-demographic characteristics of the participants. Variables such as age, gender, and marital status were analysed in detail in both studies. The average age of mothers of children with ASD was 42.9 years, while the average age of adults who experienced the earthquake was 38.39 years. Both studies covered a wide age range.

Psychological and economic challenges were significant in both groups. It was found that both groups faced serious psychological and economic difficulties. The unemployment status of mothers of children with ASD is 56.7%, while among adults who faced the earthquake, the unemployment rate was 48.2%. Both studies identified significant issues related to economic burdens and unemployment. Job loss among those affected by the earthquake was reported at 97.3%, and unemployment among mothers of children with ASD was similarly high. These findings highlight the need for comprehensive support and intervention programs to strengthen psychological resilience. Specifically, psychological education, counseling, and support services should be made available to help individuals better cope with stress, failure, illness, and other challenges. Furthermore, programs aimed at boosting self-confidence and motivation can contribute to improving psychological resilience. Providing such support is critical for enhancing overall well-being and quality of life. The impact of traumatic experiences is holistic, requiring serious psychological, emotional, and cognitive interventions throughout a person's life. Based on these findings, post-disaster psychosocial support program planning and implementation should be more effective and targeted. Long-term support and follow-up programs are particularly necessary for preventing and treating PTSD and other mental health issues. In conclusion, these data underscore the importance of providing both psychological and economic support following disasters, demonstrating that disaster response strategies should be informed by such comprehensive data. Future studies may compare mothers of children with ASD with mothers of typically developing children and involve more participants to achieve more detailed findings. Statement of Research and Publication Ethics: This is a research article containing original data and has not been previously published or submitted for publication to any other publication organization. The author has complied with ethical principles and rules throughout the research process. Informed consent was obtained from volunteer participants in the study and confidentiality of the participants was maintained.

**Author contribution rates to the article:** The first author of this article contributed 50% to the preparation of the study, data collection, interpretation of the results, and writing of the article.

**Conflict of interests:** There is no potential conflict of interest in the study.

**Ethical approval:** Permission for the study was obtained from Lefke Avrupa University Scientific Research and Publication Ethics Committee, with the date and number 07.06.2024.BAYEK049.04.

**Informed consent:** Participants were informed about the purpose, process, benefits, and potential risks of the relevant research. It was stated both in writing and verbally that the research was conducted on a voluntary basis and that they could withdraw from the study at any time without any negative consequences.

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**Data availability:** The data has been saved to a USB storage device. However, since participants were informed that their data would not be shared with third parties, access to the stored information is restricted. All data will be deleted and destroyed after five years.

## References

- Afet ve Acil Durum Yönetimi Başkanlığı (AFAD) (2023) 06 Şubat 2023 Pazarcık (Kahramanmaraş) Mw 7.7 ve Elbistan (Kahramanmaraş) Mw 7.6 Depremlerine İlişkin Ön Değerlendirme Raporu.
- Aker, T. (2006). 1999 Marmara depremi: Epidemiyolojik bulgular ve toplum ruh sağlığı uygulamaları üzerine bir gözden geçirme. *Türk Psikiyatri Dergisi*, 17(3), 204-212.
- Alexander, D. E. (2010). The L'Aquila earthquake of 6 April 2009 and Italian Government policy on disaster response. *Journal of Natural Resources Policy Research*, 2(4), 325-342.
- Arlikatti, S., Lindell, M. K., Prater, C. S., & Zhang, Y. (2007). Risk area accuracy and hurricane evacuation expectations of coastal residents. *Environment and Behavior*, 39(2), 225-248. <https://doi.org/10.1177/00113916506296728>
- Arnold, J. L., Durkin, M. E., & Whitaker, S. (1982). An earthquake disaster in Guatemala: An epidemiologic assessment of the relief effort. *Annals of Emergency Medicine*, 11(1), 7-13. [https://doi.org/10.1016/S0196-0644\(82\)80005-3](https://doi.org/10.1016/S0196-0644(82)80005-3)
- Başoğlu, M., Şalcıoğlu, E., & Livanou, M. (2002). Traumatic stress responses in earthquake survivors in Turkey. *Journal of Traumatic Stress: Official Publication of the International Society for Traumatic Stress Studies*, 15(4), 269-276.
- Benight, C. C., Swift, E., Sanger, J., Smith, A., & Zeppelin, D. (1999). Coping self-efficacy as a mediator of distress following a natural disaster. *Journal of Applied Social Psychology*, 29(12), 2443-2464.
- Betts, K., Williams, G. M., Najman, J. M., Bor, W., & Alati, R. (2012). Pre-trauma verbal ability at five years of age and the risk of post-traumatic stress disorder in adult males and females. *Journal of Psychiatric Research*, 46(7), 933-939. <http://dx.doi.org/10.1016/j.jpsychires.2012.04.002>
- Blanchard-Boehm, R. D., & Cook, M. J. (2004). Risk communication and public education in Edmonton, Alberta, Canada on the 10th anniversary of the "Black Friday" tornado. *International Research in Geographical and Environmental Education*, 13(1), 38-54.
- Breslau, N., Kessler, R. C., Chilcoat, H. D., Schultz, L. R., Davis, G. C., & Andreski, P. (1998). Trauma and posttraumatic stress disorder in the community: The 1996 Detroit Area Survey of Trauma. *Archives of General Psychiatry*, 55, 626-632.
- Buyuk H. F. (2023) Turkey: Earthquakes Have Cost Economy \$103.6 Billion, Balkan Insight News. <https://balkaninsight.com/2023/03/17/turkey-earthquakes-have-cost-economy-103-6-billion>. Accessed on 5 April 2023

- Charman, T. (2014). Early identification and diagnosis of autism spectrum disorders. In Volkmar, F. R. (Ed.), *Encyclopedia of Autism Spectrum Disorders* (pp. 1115-1119). Springer.
- Constans, J. I., Vasterling, J. J., Deitch, E., Han, X., Teten Tharp, A. L., Davis, T. D., et al. (2012). Pre-Katrina mental illness, post-disaster negative cognitions, and PTSD symptoms in male veterans following Hurricane Katrina. *Psychological Trauma: Theory, Research, Practice, and Policy*, 4(6), 568-577. <http://dx.doi.org/10.1037/a0027487>.
- Coskun G (2023) 49. Gün. Depremde ölü sayısı ne kadar oldu, güncel yaralı sayısı kaç? CnnTurk News <https://www.cnntrk.com/turkiye/49-gun-depremdede-olu-sayisi-ne-kadar-oldu-guncel-yarali-sayisi-kachangi-ilde-kac-bina-yikildi-kac-kisi-oldu> Accessed 26 March 2023.
- Davidson, J. R., Hughes, D., Blazer, D. G., & George, L. K. (1989). Post-traumatic stress disorder in the community: An epidemiological study. *Psychological Medicine*, 21(3), 713-721.
- Davitsou, J. R. T., John, M. D., & Fairbank, A. (1993). *The Epidemiology of posttraumatic stress disorder*. In R. T. D. Jonathan, & B. Edna (Eds.), *Posttraumatic stress disorder: DSM IV and Beyond* (pp. 147-173). American Psychiatric Pub.
- DiGangi, J. A., Gomez, D., Mendoza, L., Jason, L. A., Keys, C. B., Karestan, C., et al. (2013). Pre-trauma risk factors for posttraumatic stress disorder: A systematic review of the literature. *Clinical Psychology Review*, 33(6), 28-44. <https://doi.org/10.1016/j.cpr.2013.05.002>
- Drabek, T. E. (1986). *Human System Responses to Disaster: An Inventory of Sociological Findings*. Springer-Verlag.
- Ekman, P. (2004, April). *What we become emotional about*. In *Feelings and emotions: The Amsterdam symposium* (pp. 119-135) Cambridge University Press.
- Evans, S. (2023) Verisk (AIR) pegs Turkey quake economic loss at \$20bn+, insured at \$1bn+. Artemis BMWeb. <https://www.artemis.bm/news/verisk-air-pegs-turkey-quake-economic-loss-at-20bn-insuredat-1bn> Accessed on 26 March 2023
- Fergusson, D. M., Horwood, L. J., Boden, J. M., & Mulder, R. T. (2014). Impact of a major disaster on the mental health of a well-studied cohort. *JAMA psychiatry*, 71(9), 1025-1031.
- Fountain, C., Winter, A. S., & Bearman, P. S. (2012). Six developmental trajectories characterize children with autism. *Pediatrics*, 129(5), e1112-e1120.
- García, L. F., Gutiérrez, F., García, O., & Aluja, A. (2024). The alternative model of personality disorders: Assessment, convergent and discriminant validity, and a look to the future. *Annual Review of Clinical Psychology*, 20. <https://doi.org/10.1146/annurev-clinpsy-081122-010709>.
- Gill, P., Stewart, K., Treasure, E., & Chadwick, B. (2008). Methods of data collection in qualitative research: interviews and focus groups. *British dental journal*, 204(6), 291-295.
- Gledhill, J., & Currie, J. L. (2020). Characteristics of teachers' recommended social support strategies for primary students with ASD. *International Online Journal of Primary Education (IOJPE)*, 9(1), 18-34.
- Goren M (2023) Depremin Maliyeti Ne Olacak? <https://sanayigazetesi.com.tr/depremin-maliyeti-ne-olacak/> Accessed on 5 April 2023
- Hamengku Buwono X. (2008). *Learning from the 27 May 2006 earthquake*. In D. Karnawati (Ed.), *The Yogyakarta earthquake of May 27, 2006*. Star, pp. xi-xviii.
- Hammond, K. W., Scurfield, R. M., & Risse, S. C. (1993). *Post-Traumatic stress disorder*. In D. L. Dunner (Ed.) *Current psychiatric therapy*. W.B. Saunders, pp. 288-295.
- Heckhausen, J. (2002). *Developmental regulation of life-course transitions: A control theory approach*. In L. Pulkkinen, & A. Caspi (Eds.) *Paths to successful development: Personality in the life course* CUP, pp. 257-280.

- Hobfoll, S. E. (2002). Social and psychological resources and adaptation. *Review of General Psychology*, 6(4), 307-324.
- Hobfoll, S. E., Schroder, K. E. E., Wells, M., & Malek, M. (2002). Communal versus individualistic construction of sense of mastery in facing life challenges. *Journal of Social and Clinical Psychology*, 21(4), 362-399.
- Huang, S. K., Lindell, M. K., & Prater, C. S. (2017). Multistage model of hurricane evacuation decision: Empirical study of hurricanes Katrina and Rita. *Natural Hazards Review*, 18(3), 04017003. [https://doi.org/10.1061/\(ASCE\)NH.1527-6996.0000244](https://doi.org/10.1061/(ASCE)NH.1527-6996.0000244)
- Jiang, N., Cheng, J., Ni, Z., Ye, Y., Hu, R., & Jiang, X. (2021). Developing a new individual earthquake resilience questionnaire: A reliability and validity test. *PLoS one*, 16(1), e0245662.
- Johnstone, M. L. (2017). Depth interviews and focus groups. *Formative research in social marketing: Innovative methods to gain consumer insights*, 67-87.
- Jon, K., Smith, H., & Doe, J. (2016). Emotional Responses during Earthquakes: An Assessment Using the Mood Adjective Checklist. *Journal of Disaster Research*, 11(2), 101-112.
- Kaplan, H. I., & Sadock, B. J. (1998). *Anxiety disorders*. In H. I. Kaplan & B. J. (Eds.) *Sadock's Synopsis of Psychiatry*. Williams & Wilkins Co., pp.581-628.
- Kar, N., & Bastia, B. K. (2006). Post-traumatic stress disorder, depression and generalised anxiety disorder in adolescents after a natural disaster: A study of comorbidity. *Clinical Practice and Epidemiology in Mental Health*, 2, 1-7.
- Krueger, R. A., & Casey, M. A. (2015). *Focus group interviewing*. In *Handbook of practical program evaluation* (pp. 506–534). Wiley. <https://doi.org/10.1002/9781119171386.ch20>
- Lambert, S. D., & Loiselle, C. G. (2008). Combining individual interviews and focus groups to enhance data richness. *Journal of advanced nursing*, 62(2), 228-237.
- Liang, Y., Cheng, J., Ruzek, J. I., & Liu, Z. (2019). Posttraumatic stress disorder following the 2008 Wenchuan earthquake: A 10-year systematic review among highly exposed populations in China. *Journal of affective disorders*, 243, 327-339.
- Lindell, M. K. (1994). *Perceived risk, actual risk, and behavior: A methodological critique*. In R. E. Dunlap, W. Michelson, & G. E. Stout (Eds.) *Advances in Environmental Psychology*, 4, Academic.
- Lindell, M. K. (2018). The Dynamics of Disaster Risk Perception and Mitigation. *Risk Analysis*, 38(1), 99-117.
- Lindell, M. K., & Perry, R. W. (2004). *Communicating environmental risk in multiethnic communities*. Sage.
- Lindell, M. K., Arlikatti, S., & Prater, C. S. (2016). Risk Perception and Protective Actions during Earthquakes: A Cross-Cultural Comparison. *Journal of Cross-Cultural Psychology*, 47(3), 393-411.
- Lindell, M. K., Prater, C. S., & Perry, R. W. (2015). Earthquake Risk Perception and Preparedness in the U.S. Pacific Northwest. *International Journal of Disaster Risk Reduction*, 12, 123-134.
- Mahmut, E. (2023). *Deprem Sonrası Dönemde Erişkin Kişilerin Post Travmatik Stres Bozukluğu, Psikolojik Dayanıklılık ve İlişkili Durumlar Yönünden Değerlendirilmesi*. [Yayımlanmamış yüksek lisans tezi] Sağlık Bilimleri Üniversitesi Adana Tıp Fakültesi Aile Hekimliği Kliniği.
- Matthews, G., Jones, D. M., & Chamberlain, A. G. (1990). Refining the Measurement of Mood: The Mood Adjective Checklist (MACL) Revised. *Personality and Individual Differences*, 12(3), 287-297.
- Mawson, A. R. (2005). Understanding mass panic and other collective responses to threat and disaster. *Psychiatry*, 68(2), 95-113.



- Mileti, D. S., & Fitzpatrick, C. (1992). The causal sequence of risk communication in the Parkfield earthquake prediction experiment. Public Entity Risk Institute.
- Mileti, D. S., & Peek, L. (2000). The social psychology of public response to warnings of a nuclear power plant accident. *Journal of Hazardous Materials*, 75(2-3), 181-194. [https://doi.org/10.1016/S0304-3894\(00\)00179-5](https://doi.org/10.1016/S0304-3894(00)00179-5)
- Morgan, D. L. (1996). *Focus groups*. Annual review of sociology, 22(1), 129-152.
- Nazeer, A., & Ghaziuddin, M. (2012). Autism spectrum disorders: Clinical features and diagnosis. *Pediatric Clinics*, 59(1), 19-25.
- Neuendorf, K. A. (2018). *The content analysis guidebook*. Sage.
- Orçan, G., & Karaaziz, M. (2024). Depremi yaşamış yetişkinlerde travma sonrası stres bozukluğu ve travma sonrası büyüme arasındaki ilişkide stresle başa çıkma tarzlarının yordayıcı rolü. *International Journal of Social Sciences (IJSS)/ Uluslararası Sosyal Bilimler Dergisi*, 8(34). <https://doi.org/10.52096/usbd.8.34.08>
- Orr, S. P., Lasko, N. B., Macklin, M. L., Pineles, S. L., Chang, Y., & Pitman, R. K. (2012). Predicting post-trauma stress symptoms from pre-trauma psychophysiologic reactivity, personality traits and measures of psychopathology. *Biology of Mood & Anxiety Disorders*, 2(1), 1-12.
- Özçetin, A., Maraş, A., Ataoğlu, A., & İçmeli, C. (2008). Deprem sonucu gelişen travma sonrası stres bozukluğu ile kişilik bozuklukları arasında ilişki. *Duzce Medical Journal*, 10(2), 8-18.
- Özgen, F. ve Aydın, H. (1999). Travma sonrası stres bozukluğu. *Klinik Psikiyatri*, 1, 34-41.
- Peek, L., & Mileti, D. S. (2002). *The history and future of disaster research*. In R. A. Stallings (Ed.), *Methods of Disaster Research*. Xlibris, pp. 5-18.
- Perkonig, A., Kessler, R. C., Storz, S., & Wittchen, H. U. (2000). Traumatic events and post-traumatic stress disorder in the community: prevalence, risk factors and comorbidity. *Acta psychiatrica scandinavica*, 101(1), 46-59. <https://doi.org/10.1034/j.1600-0447.2000.101001046.x>
- Prati, G., Catufi, V., & Pietrantonio, L. (2012). Emotional Responses to Earthquakes: A Survey of Affective Risk Perceptions. *Journal of Environmental Psychology*, 32(1), 42-50.
- Quarantelli, E. L., & Dynes, R. R. (1977). Response to social crisis and disaster. *Annual Review of Sociology*, 3, 23-49.
- Rabiee, F. (2004). Focus-group interview and data analysis. *Proceedings of the nutrition society*, 63(4), 655-660.
- Resnick, H. S., Foy, D. W., Donahoe, C. P., & Miller, E. N. (1989). Antisocial behavior and posttraumatic stress disorder in Vietnam veterans. *Journal of Clinical Psychology*, 45, 860-866.
- Reyes, G., & Jacobs, G. A. (Eds.). (2006). *Handbook of international disaster psychology*. Fundamentals and Overview, 4, Praeger.
- Rousseau, D. M., Sitkin, S. B., Burt, R. S., & Camerer, C. (2002). Not so different after all: A cross-discipline view of trust. *Academy of Management Review*, 23(3), 393-404.
- Sagbas, G., Sheikhi Garjan, R., Sarikaya, K., & Deniz, D. (2024). Field reconnaissance on seismic performance and functionality of Turkish industrial facilities affected by the 2023 Kahramanmaraş earthquake sequence. *Bulletin of Earthquake Engineering*, 22(1), 227-254. <https://doi.org/10.1007/s10518-023-01741-8>
- Sisto, A., Vicinanza, F., Campanozzi, L. L., Ricci, G., Tartaglini, D., & Tambone, V. (2019). Towards a transversal definition of psychological resilience: A literature review. *Medicina*, 55(11), 745. <https://doi.org/10.3390/medicina55110745>



- Slovic, P. (2004). What's fear got to do with it-It's affect we need to worry about. *Mo. L. Rev.*, 69, 971.
- Sorensen, J. H. (2000). Hazard warning systems: Review of 20 years of progress. *Natural Hazards Review*, 1(2), 119-125. [https://doi.org/10.1061/\(ASCE\)1527-6988\(2000\)1:2\(119\)](https://doi.org/10.1061/(ASCE)1527-6988(2000)1:2(119))
- Sorensen, J. H., & White, S. E. (1980). Risk perception and risk communication for nuclear power plant accidents. *Journal of Environmental Psychology*, 10(4), 363-377.
- Sönmez, M. B. (2022). Depremin psikolojik etkileri, psikolojik destek ve korkuyla baş etme. *Totbid Dergisi*, 21(3), 337-343. <https://doi.org/10.5578/totbid.dergisi.2022.46>
- Stewart, M., Reid, G., & Mangham, C. (1997). Fostering children's resilience. *Journal of pediatric nursing*, 12(1), 21-31.
- Şahin, N. H., Batigün, A. D., & Yılmaz, B. (2007). Psychological symptoms of Turkish children and adolescents after the 1999 earthquake: Exposure, gender, location, and time duration. *Journal of Traumatic Stress: Official Publication of the International Society for Traumatic Stress Studies*, 20(3), 335-345. <https://doi.org/10.1002/jts.20217>
- Takuma, T. (1972). A Study of Human Behavior in Panic Situations. *Reports of the National Research Institute of Police Science*, 15(1), 1-14.
- Thorne, S. (2016). *Interpretive description: Qualitative research for applied practice*. Routledge.
- Tierney, K. J., Lindell, M. K., & Perry, R. W. (2001). *Facing the Unexpected: Disaster Preparedness and Response in the United States*. Joseph Henry Press.
- Ungar, M., & Theron, L. (2020). Resilience and mental health: How multisystemic processes contribute to positive outcomes. *The Lancet Psychiatry*, 7(5), 441-448.
- Wei, X., Smith, H., & Jones, R. (2017). Assessing Affective Responses to Earthquake Risks: A Study Using the Mood Adjective Checklist. *Journal of Risk Research*, 20(6), 732-747.
- Wilson, M. (1997). *Focus Groups: A Practical Guide for Applied Research*. Sage Publications.
- Wu, J. Y., Lindell, M. K., & Prater, C. S. (2015). Logistics of hurricane evacuation in hurricanes Katrina and Rita. *Transportation Research Part F: Traffic Psychology and Behaviour*, 29, 108-123. <https://doi.org/10.1016/j.trf.2015.01.005>
- Yaşar, A. B. (2024). Kişilik Bozukluklarında Etiyoloji ve Epidemiyoloji. *Türkiye Klinikleri Psychiatry-Special Topics*, 17(2), 7-16.
- Yıldız, C. D., & Öztürk, E. D. (2023). Eğitim ve Çocuk Özelinde Kahramanmaraş Depremleri. *Sosyal, Beşeri ve İdari Bilimler Dergisi*, 6(12), 1649-1664. <https://doi.org/10.26677/TR1010.2023.1337>
- Zaumseil, M., & Schwarz, S. (2014). Understandings of coping: A critical review of coping theories for disaster contexts. *Cultural psychology of coping with disasters: The case of an earthquake in Java, Indonesia*, 45-83. [https://doi.org/10.1007/978-1-4614-9354-9\\_2](https://doi.org/10.1007/978-1-4614-9354-9_2)



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# **A General Evaluation of the 1893 and 2023 Earthquakes in Adıyaman and its Environs**

Adıyaman ve Çevresinde 1893 ve 2023 Depremlerinin Genel Değerlendirmesi

**Murat Gökhan Dalyan\***

## **Abstract**

Given that Adıyaman and its surroundings are located on an active fault zone, it is natural that they have experienced numerous earthquakes, both instrumental and historical, throughout history. It would be remiss not to mention the earthquake that occurred on 6 February 2023, which regrettably resulted in a number of fatalities and significant damage to property in Adıyaman and its neighbourhood. It is also necessary to refer to the earthquake that occurred 130 years earlier, which centred in Malatya and produced similar results in terms of intensity and destruction. As a result, unfortunately, a considerable number of houses were destroyed, and many public buildings and places of worship were damaged. It would seem that the full extent of the losses caused by the earthquake of 1893, which resulted in a significant number of fatalities, was not immediately apparent and came to light only in the following days. It would be fair to say that the region experienced a number of aftershocks that lasted for some time following the mentioned earthquake. The challenging winter conditions made it difficult to reach the affected people and

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regions that the earthquake had damaged. This regrettably had an adverse effect on the state's aid efforts. A similar situation occurred in the earthquake on 6 February 2023. It is worth noting that the problem had a significant impact on the increase in the number of deaths and losses. Perhaps the most significant challenge encountered in the aftermath of both earthquakes was the removal of debris and the difficulty in coordinating aid efforts regularly. In this study, an attempt will be made to draw comparisons between the Ottoman earthquake and the two recent earthquakes.

**Keywords:** *Adıyaman, earthquakes in the Ottoman Empire, Republic of Türkiye,*

## Öz

Adıyaman ve çevresi aktif bir fay zonu üzerinde yer aldığı için tarih boyunca doğal olarak çok sayıda aletsel ve tarihsel depremler yaşanmıştır. 6 Şubat 2023'te meydana gelen ve ne yazık ki Adıyaman ve çevresinde birçok can kaybına ve ciddi ölçüde maddi hasara yol açan depremden bahsetmemek yanlış olurdu. Ayrıca, 130 yıl önce şiddet ve yıkım açısından benzer sonuçlar doğuran Malatya merkezli depremden söz etmek gerekmektedir. Bu deprem sonucunda ne yazık ki hatırı sayılır miktarda ev yıkılmış, pek çok kamu binası ve dini yapı zarar görmüştür. Anlaşıldığı kadarıyla önemli sayıda ölümlü sonuçlanan 1893 depreminin yol açtığı kayıpların tam bir boyutu hemen anlaşılamamış ve ancak sonraki günlerde ortaya çıkmıştır. Söz konusu depremin ardından bölgede bir süre devam eden bir dizi artçı sarsıntı meydana gelmiştir. Zorlu kış şartlar, depremin etkilediği bölgelere ve insanlara ulaşmayı zorlaştırmıştır. Bu durum maalesef devletin yardım ulaştırma çabalarını olumsuz etkilemiştir.6 Şubat 2023'teki depremde de benzer bir durum meydana gelmiştir. Yetersiz insani yardım ve sert kış koşullarının zararlı etkisi ölüm ve yaralanmaların artmasına katkıda bulunmuştur. Her iki depremin ardından yaşanan belki de en önemli zorluk, enkaz kaldırma ve yardım çalışmalarını sistematik ve etkili bir şekilde koordine etmede karşılaşılan zorluktur. Bu makalede, 1893 ve 2023 depremleri karşılaştırmalı olarak incelenerek, tarihten günümüze toplumda ve devlette deprem bilincinin oluşup oluşmadığı analiz edilecektir.

**Anahtar sözcükler:** *Osmanlı İmparatorluğunda depremler, Adıyaman, Türkiye Cumhuriyeti*

## Introduction: Purpose and methodology of the study

This study focuses on the earthquakes that have occurred in the province of Adıyaman, both historically and in recent times. It would seem that, among these earthquakes, the 1893 and 2023 earthquakes are similar in terms of their occurrence and consequences. That is why, we have chosen to focus our study on these two earthquakes. In order to gain a deeper insight into the subject, it would be beneficial to go through a brief analysis of the earthquakes that occurred in the region.

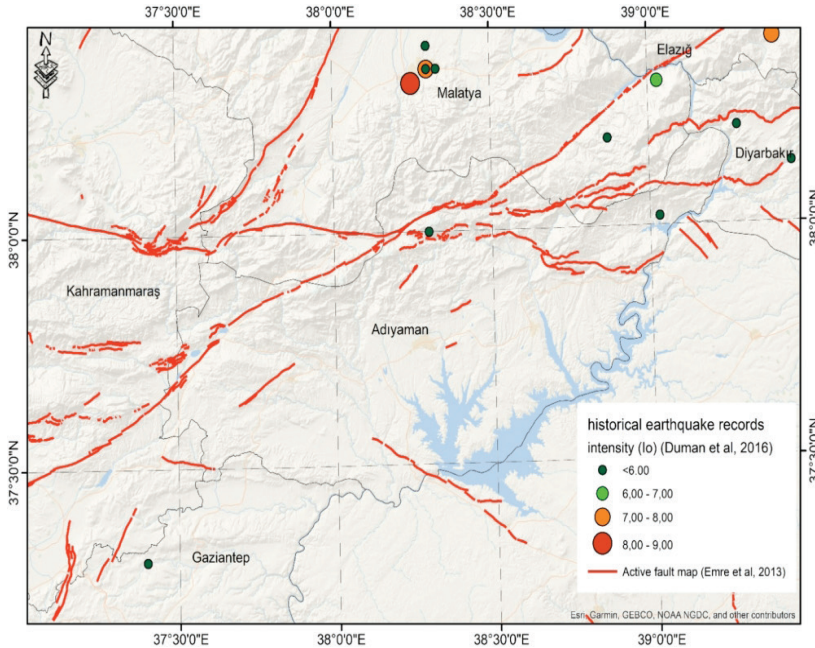
The earthquake of 1893 was selected as the subject of the study for a number of reasons. First, it displays similar characteristics and results to the earthquake dated 06 February 2023 in terms of intensity and periodicity. Second, it has a greater number of data sources than

other earthquakes. For this reason, we have sought to gain a better understanding of the earthquake of 1893 by examining a variety of sources, including Ottoman archival materials and newspapers written in minority languages. Naturally, in comparison to the 1893 earthquake, the records of the 6 February 2023 earthquake are more up-to-date and detailed.

It is well known that our country is prone to earthquakes. Could we perhaps inquire as to what kind of measures have been taken from past to present? Could we investigate whether the earthquakes that have occurred in the vicinity of Adıyaman have consistently yielded comparable outcomes?? Could we perhaps inquire as to whether there has been a change in the level of awareness of earthquakes among the general public, both in the past and in the present? We will endeavour to provide answers to the aforementioned questions. We believe this study could provide valuable insights for future comparisons with other studies on the earthquake of 2023.

### Earthquakes in the region before the Ottoman Empire

Türkiye is located in a region with a long history of seismic activity. There have been several earthquakes in the region both in the past and recently, all of which have been recorded in historical records, measured with instruments, and caused significant destruction and loss of life in various parts of the country. This serves to highlight once again the importance of being prepared for such natural disasters. It seems reasonable to suggest that the region of Adıyaman and its surroundings has experienced a relatively high level of seismic events, both historically and in terms of instrumental measurement.



The geological structure and faults of the region may be active, as the earthquakes throughout history show. The earthquake records suggest that these risks may persist and that major earthquakes may occur in the future. This, it would be beneficial to consider ways of improving the structures in the region as earthquake-resistant and to prepare effective emergency plans. Historical evidence suggests that the regions of Adiyaman, Malatya, Kahramanmaraş and Hatay have been affected by earthquakes on numerous occasions, with the most recent notable event being the earthquake on 6 February 2023.

It should also be pointed out that one of the oldest earthquakes recorded in Anatolia took place in the Antakya region during the reign of Roman Emperor Claudius (41-54 AD) (Wallace-Hadrill, 1982: 4). Another earthquake occurred on Sunday, December 13, 115, while Roman Emperor Trajan was in Antakya for the Parthian campaign. It is worth noting that this unfortunate event caused significant damage to the region, including the surrounding settlements (Longden, 1931: 2-4; Wallace-Hadrill, 1982: 5).

Several other earthquakes have been recorded since then, especially the major one that occurred in Antakya and its surroundings in 457 AD (Sbeinati, Darawcheh and Mouty, 2005:386.). Another major earthquake that deserves to be mentioned occurred in Samosata and the surrounding cities on 1 February 458 (Ambraseys, 2009: 168). Towards the end of the 5th century, a number of unfortunate occurrences took place throughout south-eastern Anatolia, including earthquakes and famine. Considering prevailing circumstances, Emperor Anastasius took the initiative to abolish the tax that the people had been paying every four years (Süryani Mar-Yeşua, 1958: 15–18). Apparently, the earthquake had several aftershocks.

Another earthquake in September 499 caused extensive damage in numerous cities and villages in Syria. It seems plausible to suggest that the Nicopolis Church, located between Jerusalem and Jaffa, collapsed (Süryani Mar-Yeşua, 1958: 19-21). The effects of the earthquake that occurred in Antakya and Syria in 526 is estimated to have lasted for approximately two years and the aftershocks continued until 528 (Sbeinati, Darawcheh and Mouty, 2005:387.; Wallace-Hadrill, 1982: 10). In 569, between October and September, a violent earthquake is thought to have occurred between Samosata (modern Samsat) and Edessa (modern Urfa) in eastern Anatolia. This resulted in significant loss of life (Ambraseys, 2009:213). Other earthquakes in Syria and its surroundings took place in March 590, April 602 and June 660. Many cities in the southeastern Anatolian and Syrian regions were unfortunately destroyed and many people lost their lives (Ambraseys 2009).

In 679, a notable earthquake occurred in Syria and caused sizable damage in the surrounding cities and Urfa was particularly affected. In its aftermath, there was an unfortunate increase in the rat population, which led to a decline in crop yields and thus, to food insecurity for the local population. Subsequently, there was a notable increase in the number of mice, which was followed by a significant incursion of locusts. It seems that the aftershocks of this significant earthquake continued intermittently for approximately seven years (Süryani Mihael, n.d, 50-51). Another major earthquake is thought to have occurred in the Sarin region, near Urfa, in 705. Subsequently, a significant seismic event took place in Syria in 713, resulting in extensive damage in numerous urban centres, including Aleppo,

Kinnesrin and Antakya. A large number of buildings were destroyed, and many lives were lost. Subsequently, the region became subjected to a locust invasion and a storm, which caused considerable damage to the cities. The severe cold that occurred a year later posed a significant challenge for the people of the region. It appears that the earthquake of 718 created similar results (Süryani Mihael, n.d.: 66-70; Dalyan, 2023: 181). According to Assyrian Michael, the earthquake that occurred in the Damascus region in 745 impacted the city's buildings and structures, causing them to shake with a similar intensity to that of tree leaves. It seems that the earthquake, which lasted intermittently for several days, caused significant damage to many Syrian cities (Rabo, 2014: 505). A severe earthquake that occurred in 817 seems to have resulted in some fissures forming between the mountains near the village of Argosa in the Claudia region (Gerger region). It appears that one of these mountains was affected by the earthquake, resulting in the Euphrates River, which flows nearby, being blocked for nearly a day (Michael Rabo, 2014: 537).

In 1115, another significant seismic event occurred in Adıyaman and its surrounding areas. The Mar Jean and Forty Martyrs Church in Keysun (modern Çakırhöyük) near Besni was destroyed. Samosat (Samsat) was also affected by the disaster. It seems likely that the churches in question were rebuilt by Bishop Dionysius. The earthquake caused great damage in the city of Samsat as well as in Hısn-ı Mansur and Keysun. The Armenian priest Grigoris was also one of the many who lost their lives in the wake of this unfortunate earthquake. It appears that the earthquake may also destructed the Balaş Castle (Abu'l-Farac, 1998: 354). According to Mateos from Urfa, the earthquake that started at night and centred in Maraş, caused significant loss of life and extensive damage. Following the earthquake in February, there appeared to be a noticeable change in weather conditions, with snowfall (Urfalı Mateos, 2000: 255–256). This earthquake may be of a similar magnitude and origin to the one that occurred on 6 February 2023.

A number of intermittent earthquakes were reported in this region in September 1156 (Kopraran, 1966: 513–514). It seems that Samsat Castle, which had already suffered from serious damages as a result of previous earthquakes, was repaired by Fahreddin Kara Arslan, one of the Artuqids. This is inferred from the castle inscription unearthed in his name as a result of the excavations (Bulut, 2000: 5). It seems that Samsat Castle was repaired twice during this period and was rebuilt with clay and a stone foundation (Eger, 2017: 123).

On 17 August 1167 another seismic event took place, impacting south-eastern Anatolia and Syria. There was another earthquake in 1170. Unfortunately, the castle walls at Samsat had to be renewed once again, as they had been damaged quite significantly in this earthquake (Bulut, 2000: 4). It seems that the damage caused to the castles by this earthquake was repaired during the rule of Nureddin Zengi (İbnü'l-Esir, 1991: 286). There may have been a sheltered palace in Samsat in the 13th century, along with its attached bath, walls, and many private houses. Apparently, the Mamluks were not particularly interested in Samsat, which was unfortunately devastated after the earthquake in the 14th century, and they preferred to rule it from Kâhta and Gerger instead (Bulut, 2000: 5). The Adıyaman region has experienced a number of earthquakes over time, due to its geographical location.



### **1893 Malatya Earthquake and its effects on Adıyaman (Hisn-i Mansur)**

The regions of Syria and Mesopotamia were subject to a number of earthquakes during the Ottoman period. One of the most significant ones is the Aleppo Earthquake of 1822. It is estimated that thousands of people lost their lives in Antep, Kilis, Aleppo and other Syrian cities in that catastrophe. Another earthquake that affected our region and caused many losses occurred in Aleppo in 1872 (Satılmış, 2019: 10–11). However, with regard to our topic, we will seek to evaluate the effects of the Malatya-centred earthquake in 1893 upon the Adıyaman region.

Two years prior to the 1893 earthquake, a severe earthquake occurred in 1891 in the region, after which several settlements in Malatya, Palu and Adıyaman were struck by three aftershocks. As a result, large cracks formed in the middle of the Cami-i Kebir, (Grand Mosque), particularly of its dome (Işık, 1998: 612; Taşkın, 2018:77; Satılmış, 2023:297-299). Following the earthquake in 1891, the heavy and continuous rainfall caused streams and rivers in the Adıyaman region to overflow and form floods. Unfortunately, the floods caused significant damage to the bridges in the district, which led to disruptions in transportation. As a result, the officers from Malatya sanjak, who were in the region due to the earthquake, were unable to return as planned after their inspections (DH.MKT. 1/39). From the correspondence and old records regarding the repair of the mosque, it can be inferred that it was originally known as the Sultan Alaaddin Mosque and that a person named Hacı Bekir was appointed as the imam with a daily wage of eight Kuruş (ŞD. 129/32). In 1891, a sum of 10.000 Kuruş was kindly donated by the public for the reconstruction of the Grand Mosque, which had unfortunately been damaged by the earthquake (Taşkın, 2020: 172).

In the aftermath of the earthquake that struck in 1891, the region continued to experience aftershocks in Besni, Kâhta, and Adıyaman. It should be mentioned that a mild earthquake occurred at 01:30 on 2 March 1893, with an epicentre in Malatya. This earthquake was followed by six aftershocks in a period of ten minutes. Following these preliminary tremors, a considerably more powerful and destructive earthquake struck at seven o'clock in the evening on the same day. According to the records, the earthquake occurred on the fault on the 54 km long Çelikhhan-Gölbaşı segment, which is located in the Eastern Anatolian Fault Zone. Many earthquake scientists thought that the magnitude of the 1893 earthquake was over 7. Rome, Potsdam and Strasbourg stations provided data on the Malatya earthquake, which was so intense that people leapt out of bed. This earthquake caused major damage in the Malatya, Adıyaman, and Besni regions. In order to ascertain the extent of the disaster, Elazığ Governor Enis dispatched officials to the region (Satılmış, 2016: 142–143; Ürkmez, 2016; Satılmış, 2023: 710).

The delegation, which had come to the region to conduct earthquake research, could not reach other villages damaged by the earthquake due to the heavy snow and rain, which had caused the streams to overflow and made transportation impossible. The continuous rain unfortunately caused the houses, roofs, and walls which were damaged and cracked in the earthquake, to collapse and the debris to become even heavier. This is one of the key reasons behind the increased damage in the region (Y.A.HUS.270/111; DH.MKT. 1/39; Y.A.HUS.



271/63).<sup>1</sup> The houses in Adıyaman and its neighbourhood are largely made of mud bricks and filled soil. It is therefore understandable that houses made of flimsy materials could not withstand the violence of nature and the earthquake, resulting in their collapse. It is worth noting that the earthquakes that began in 1891 and continued intermittently played a significant role in the collapse of one-third of the 3.500 households in the centre alone together with many of the houses in the villages. (BEO.208/15547; Y.MTV.75/118; Y.MTV.75/128; Y.MTV.75/106; BEO.164/12244; BEO.165/12324; BEO.167/1245; BEO. (170/12688).

Four mosques and two masjids in Adıyaman were completely destroyed, according to the first reports of those coming to the centre. Apparently, seven of the nine minarets of these buildings were damaged and toppled. As efforts were underway to ascertain the extent of the damage caused by the earthquake, the aftershocks of the earthquake continued unabated. In the telegram sent to the Ministry of Health for damage assessment six days after the earthquake, it became apparent that the details initially sent were not as comprehensive as they could have been. It would seem that in the earthquake occurring in Adıyaman on 2 March 1893, the telegraph building, like other buildings, was greatly damaged. As a result, the exact magnitude and depth of the earthquake in Adıyaman could not be immediately conveyed to the central government. Given the condition of the building, the telegraph officers were understandably reluctant to enter. They therefore set up a tent in the garden of the government building, moved the telegraph equipment there, and were able to communicate from there. Taking that fact into consideration, it seems prudent to suggest that the number of people who died under the rubble in Adıyaman, which was previously given as 20, might perhaps be increased by six, to 26. Similarly, the number of injured, which was corrected from 2 to 32, might also be revised upwards. In the wake of the earthquake, it is estimated that approximately one-third of the 3.500 houses in the town were completely destroyed, while the remaining structures were damaged due to the ongoing aftershocks and the prolonged rainfall.

Many people were left without a place to live, while those who were fortunate enough to still have a roof over their heads were unable to enter their homes due to the aftershocks and had to spend the night outside. This unfortunate situation has caused great distress and hardship for the people affected. Considering the situation, the soldiers in the Adıyaman barracks helped the people affected by the earthquake as well as planning for twenty tents to be made available to medical personnel treating the injured. The remaining tents were distributed to those in need. It was estimated that an additional 200 tents would be required for residents of Adıyaman who were residing in provisional accommodation following the destruction of their homes. In order to address this requirement, initiatives were taken to provide financial assistance to those affected by the earthquake. In order to achieve this objective, the potential of utilising resources within the Fourth Army inventory was explored.

Islamic religious buildings and places of worship for non-Muslim communities also suffered from the earthquake. The Armenian Protestant Church and the school were partially destroyed, and that the Protestant Church was also damaged. According to the authorities, as of the telegram dated 6 March, no information had been obtained from the villages (75/118; Y.MTV. 75/128; Y. MTV. 75/106; BEO.164/12244; BEO.165/12324; BEO. (170/12688;

Y.A.HUS.270/111). In the same period, it was reported that Hindi Sadullahbeyzade Tabip Ahmed Bey, an employee at the hospital at Üsküdar, his brother Hüseyin and his wife, who were in Hisn-ı Mansur, died in the earthquake (DH.MKT. 48/27).

In a later communication dated 29 March, we were informed that 283 individuals tragically lost their lives, while 30 were injured in Adıyaman and its neighbourhood. 2.181 houses were affected, with 771 completely destroyed, 1.189 heavily damaged and 215 required repair. It would appear that the barracks, which were previously believed to have survived the earthquake unscathed, were completely destroyed. Similarly, the telegraph building also suffered severe damage. 257 oxen, 90 mules, 19 horses, 17 donkeys, 3.551 sheep and goats unfortunately perished in and around Adıyaman. Seven mosques were destroyed in Adıyaman and 94 were partially damaged in surrounding villages. In addition, two Muslim schools were completely destroyed, two were partially destroyed and one was destroyed to the extent that it could be repaired. One church was unfortunately damaged by the disaster. The remaining two churches were not as badly hit and were convenient for reconstruction. As for commercial buildings, the Pasha Hamam was severely damaged, together with the complete destruction of 84 shops, the severe damage of 64 others and the need for repair of a further 102. The disaster also led to the complete ruin of six minarets, one *tekke* and one *zaviye*. It would seem that one of the three inns in the town was also affected significantly (BEO. 208/15547; Y. MTV. 76/81; Öztürk, 2016: 114, 216, 295). It is possible that this was the Millet Khan or Abdi Aga Khan, but unfortunately there is very little information available about them. In addition to the aforementioned inns, there is another inn, known as the Şeyh Aga Inn (Gökgedik, 2011: 49-52, 61-64; Berk, 2018: 43, 164, 176). Some shops in the bazaar that were damaged by the earthquake were unfortunately demolished by the municipality. However, we are pleased to say that they were rebuilt by their owners and tenants. But the bazaar unfortunately suffered from a fire in 1910 (Gökgedik, 2011: 49-52).

It must be indicated that the aftershocks unfortunately caused an increase in various damages and casualties in the Adıyaman and Malatya regions. Enis Pasha reported that a long cycle of aftershocks of varying magnitudes continued for a while. In this context, it is worth noting that at midnight on March 11, 1893, four earthquakes struck in the Malatya and Adıyaman regions, one of which was particularly severe. The earthquake is assumed to have occurred on 2 April 1893. It seems that the aftershock that occurred the following day, on April 3, was particularly severe and caused considerable damage to the Hisn-ı Mansur district and its villages. While it is encouraging to note that the aforementioned aftershock did not result in any loss of life, it is nevertheless unfortunate that a number of structures, including 40-50 houses, a haystack, and a bulgur mill, which had previously sustained damage in earthquakes, were destroyed in the Hisn-ı Mansur district centre and the Samsat sub-district, as well as in three villages within this district. Thankfully, despite the loss of property, no loss of life occurred, which was probably an outcome of the fact that the people were outside. According to the report dated 4 April 1893, despite the occurrence of aftershocks, losses and destruction came to a halt. However, it would seem that aftershocks continued to occur at regular intervals and were reported to the central administration on a momentary basis by Elazığ Governors Enis (BEO.177/13215; Satılmış, 2016: 142).

The aftershocks of the earthquake continued in the region throughout the year. For instance, an earthquake was reported in Malatya on 20 May (Y.A.HUS.274/40). On the morning of July 3, 1893, a severe earthquake struck in Besni at approximately 5:30 am. On the following day at 11:30 in the morning, another earthquake occurred in the centre of Malatya (Y.PRK.A., 8/61). It seems a number of aftershocks hit the Malatya area in July (Y.A.HUS.278/20). Similarly, earthquakes occurred frequently throughout the year in the region, particularly in Besni.

On 4 September 1893, a series of severe earthquakes hit throughout the night. Unfortunately, a severe earthquake struck in Besni at midnight on November 26, 1893. Earthquakes continued to occur in Besni in December. The Elazığ Governor reported that a number of earthquakes of relatively mild intensity occurred in Besni between 17 and 20 December 1893 (Y.A.HUS.279/204; Y.A.HUS.279/64; Y.A.HUS.286/55; Y.A.HUS.286/94; Y.A.HUS.286/11). On September 27, 1894, at around 6:30 a.m., another earthquake occurred in Malatya, Besni, Hısn-ı Mansur, Kâhta and Akçadağ. The first of these was a particularly strong and continuous earthquake, followed 20 minutes later by a milder tremor. It seems that this earthquake did not cause any damage in the region (Y.A.HUS. 309/100; Ürkmez, 2021: 973). In 1905, the earthquake that occurred on the Malatya-Adıyaman line had a significant impact on nineteen villages in Pütürge, particularly the village of İmrün, and the Izollu region. In the earthquake that recurred several times, the Armenian church and two city walls in Adıyaman, as well as the Besni and Kâhta districts and surrounding villages, were damaged. It would be correct to say that the eastern part of Kâhta was affected to some extent. There was no significant loss of life in this area. (BEO. 2718;203824; Ürkmez, 2021: 976-983).

In 1910, Arshag Alboyadjian, who kindly provided information about the region, also mentioned the earthquake. He referred to the craftsmen from the surrounding areas coming to help with the repairs and rebuilding work following the earthquake (Alboyacıyan, 2020: 154). Similarly, following the earthquake on 6 February 2023, a number of skilled professionals from the surrounding provinces arrived to assist with repairs and renovations. It is, however, regrettable that some foreign and local craftsmen have unfortunately taken advantage of this situation and charged exorbitant fees to the people suffering due to the earthquake.

### **Repair of the Grand Mosque (Ulu Camii) and other official buildings in Adıyaman**

The Grand Mosque constitutes one of the earliest indications of the metamorphosis of the city centre of Adıyaman from its erstwhile status to its present location. Following the construction of the Grand Mosque, the city experienced a period of rapid development and growth. Subsequently, additional religious edifices, particularly other historical mosques and churches, were erected in the vicinity. It can be posited that the architectural structure of the mosque in question underwent parallel development alongside that of the city. The Grand Mosque has suffered from extensive damage and repair work over the course of its history.

We understand that Adıyaman was affected by the 1822 Aleppo earthquake. The Adıyaman Great Mosque was damaged in the same year and its minaret collapsed. It is understood that the minaret of the mosque, which was repaired in 1822, was later repaired

by Hacı Molla (Altın, 2016: 1228). After the 1893 earthquake, a number of mosques in the city centre were damaged and unfortunately some of the minarets collapsed. Unfortunately, the Grand Mosque or Sultan Alaaddin Mosque, known as the largest mosque in the heart of the city, also suffered major damage. Although it was determined that 192,440 Kuruş was needed for the reconstruction of the Grand Mosque, it was difficult to collect the exact amount from the public and only 25,000 Kuruş was collected. Despite a deficit of 170,000 Turkish Lira, the reconstruction of the mosque began. According to another document, it was revealed that 500,000 Turkish Liras were needed for the reconstruction of the mosque. As a result of the correspondence, it was requested that 200,000 Kuruş of this amount be provided by the public and the remaining 300,000 Kuruş by Abdulhamid II (BEO.297/22225; ŞD.129/32). On 12 June 1895, a request was made to the Evkaf Administration for permission to repair and rebuild the Ulu Mosque, also known as the Sultan Alaaddin Mosque Sherif (DH. MKT.339/8). Mustafa, son of Ömer, from the Baytaroğulları, completed the wings of the eastern entrance of the mosque with the help of the local people in 1900.

Similarly, the eastern door wing of the north entrance was built with the help of the congregation. The other door wing of the north entrance was built by Şambayatlı Hacı Muhammet in 1902, and Hacı Mustafa Ağa built the last congregation place of the mosque between 1900 and 1902. It is understood that the restoration of Ulu Mosque took a long time. Other mosques in Adıyaman were also affected by the earthquake and their minarets collapsed.

The aftershock in July of the same year, unfortunately, caused some damage to the minaret of Eskisaray Mosque, and some of the stones in the minaret scattered and fell to the ground. In Adıyaman and the surrounding villages, seven mosques were unfortunately completely destroyed, and ninety-four mosques were damaged. The collapse of four mosques in Besni was also reported to the official authorities (BEO. 208/15547/Y. MTV. 76/81). It is thought that the Kab Mosque was repaired by Hacı Mehmet Ali Efendi, also known as Kerimzade Kerim, in the 1900s (San, 1950: 59). The İmam Ağa Mosque was rebuilt in the late 1950s with the kind help of the Adıyaman Governor Hayri Kalkandelen, and its damaged minaret was rebuilt. In addition to these, it should be noted that the Çarşı or Hacı Abdulgani Mosque was also affected by the earthquake. It is known that the stones of the upper part of the collapsed minaret of this mosque still lie under the unfinished part today.

Efforts were made to reactivate the zawiya and tekkes damaged in the earthquake of 1893. In a document dated 14 October 1898, it was decided to allocate a monthly sum of three hundred Kuruş for the food and subsistence needs of the Ali Baba Tekke affiliated with the Kadiri Order in Adıyaman. This decision was also approved by the Malatya Sanjak (BEO.1195/89569; BEO. 880/65994).

In the earthquake of 6 February 2023, the Grand Mosque was unfortunately damaged, as it had been in previous earthquakes. The structure was completely destroyed except for a few standing walls. The area was cordoned off by the Monuments Directorate to prevent the loss of the wall structure and ensure the preservation of the historical value of the structure. The changes that this structure, which forms the centre of the city, has undergone over time as a result of the repair works may be reflected in the structure of the city and potentially show the effects

of this earthquake. It would be beneficial for the people of Adıyaman and state authorities to learn from the destruction, consider methods to increase the earthquake resistance of historical structures, and restore them in accordance with these principles. It should be accepted that historical structures are an integral part of the heritage and identity of a city.

### **The 1893 Earthquake in American missionary records**

Earthquakes in Malatya and Adıyaman were also documented by missionaries working in the region. According to reports from missionaries in the region, the 1893 earthquake caused the collapse of approximately one-third of the residential and commercial buildings in Adıyaman. The vast majority of Adıyaman villages were completely destroyed. In this context, in a village with 140 households, only two people survived the earthquake due to its intensity.

The Protestant community was unable to fulfil its financial obligations regarding the salaries of its pastoral staff. In order to meet the needs of their congregation, the missionaries immediately petitioned the Central Station in Türkiye and requested assistance from their colleagues in the United States and other stations to launch a relief campaign. Their request was accepted and donations of \$1,000 were immediately collected to repair the damaged churches and other Armenian outbuildings in Adıyaman (The Missionary Herald, 1893: 306–307). Missionaries reported that 772 houses in the Adıyaman area were completely damaged, and 1,200 houses were partially damaged. According to missionary records, only 283 people were killed, and many were injured in the city centre. The minarets of the city's mosques had collapsed. American missionaries estimated the damage caused by the earthquake in Adıyaman at between \$90,000 and \$130,000 (The Missionary Herald, 1893: 306-307; The Church Missionary Intelligencer, 1893: 708).

The Adıyaman earthquake was reported in the Portland Daily Press on 1 August 1893, based on information given to his superiors by Milo A. Jewett, the American Consul in Sivas, who visited Malatya 5 July 1893. The report stated that 2,000 houses in the Adıyaman area were destroyed, and 3,000 houses were uninhabitable. (Portland Daily Press, 1August 1893:1; Barnum, 1893:5,16)

A total of 2,000 houses were stated to be uninhabitable. The earthquake caused 913 fatalities, many injuries, and the loss of approximately 9,700 horses, donkeys, sheep, and goats. According to Jewett's statement in the newspaper, subsequent precipitation in the form of snow and rain exacerbated the already difficult conditions, causing many children to freeze to death. Following the earthquake, the Ottoman government distributed military tents and daily rations to the affected population.<sup>2</sup> In 1894, the American missionary Sanders claimed that the church in Adıyaman had suffered from significant structural damage as a result of the earthquake and that no individuals were allowed to enter the church for this reason. Negotiations were held with the relevant authorities in Harput in order to repair and reopen the church. The missionaries reported that the local authorities were initially reluctant to accept foreign aid for repairing the church. Such actions were thought to foster nationalist sentiments among the Armenian population in Adıyaman (The Missionary Herald, 1894: 524). A document from the Ottoman archives dated 31 July 1895 indicated that the Protestant church in front of Adıyaman Castle

was damaged by the earthquake in Adiyaman. As a result, the church was rebuilt. The estimated cost of building the church was 7,500 Turkish Lira, 2,400 of which came from the church aid fund and the remainder from the community of sixty-four households, comprising two hundred and fifty-seven men and women. The data show that the average number of households in the Armenian community in Adiyaman was four. There were 158 households consisting of 2,279 people in Adiyaman district (ŞD.2656/5). Later, churches and other non-Muslim places of worship were repaired with the approval of the government.

### **The 1893 Earthquake and Adiyaman in Armenian newspapers**

The Armeninan newspaper was published in Marseille between 1885 and 1923 as the official publication of the Hayots Hayrenasiragan Miyutyun (Armenian Patriotic Society). It was founded in Van by Migrdich Portukalian. The 1893 earthquake was duly reported in the Armenian press. On 18 March 1893, the Armenia newspaper, published in Istanbul, reported that an earthquake had occurred in Malatya and Hisn-i Mansur, causing significant damage to buildings and public structures. This location was found to be the place where the remains of those who lost their lives in the disaster were found. The affected were currently sheltering in tents. The government sent financial aid from Istanbul to the affected population. A total of approximately 100,000 Turkish Lira was collected from Harput and the surrounding area. The newspaper also reported that many buildings and public spaces in Malatya and Hisn-i Mansur had collapsed as a result of the earthquake, and that there were casualties under the rubble. According to the same source, while people were taking shelter in tents, the government was providing financial aid from Istanbul to those affected by the earthquake.

In addition, approximately 100,000 Turkish Liras were collected from the Harput region. In addition, the Patriarchate was asked to coordinate the provision of aid to those affected by the earthquake in Armenia. The May 20 issue stated that 885 people lost their lives as a result of the earthquake in Malatya. Of those who died, 131 people lost their lives in the centre of Malatya, while the remaining 885 people lost their lives in Hisn-i Mansur (Adiyaman), Behesni (Besni), Kahta, Akçadağ and their villages. In addition, 164 people were injured. A total of 10,020 animals, including 23 horses, 147 mules, 613 oxen, 291 cows, 56 donkeys, and 8,890 sheep and goats died under the rubble. Of the stranded animals, 3,547 belonged to villages affiliated with the Malatya sanjak centre, 3,934 to Hisn-i Mansur, 1,972 to Kâhta, 299 to Behisni (Besni), and 268 to Akçadağ.

A total of 7,262 rooms and 2,719 houses were destroyed and rendered uninhabitable. A further 9,231 rooms and 1,345 houses sustained partial damage, while 2,195 houses were slightly damaged. A total of 274 shops were destroyed, 64 were partially destroyed, and 936 were partially damaged. A total of 31 mosques were destroyed, 95 were partially destroyed, and 13 were damaged. In addition, five Armenian schools were destroyed, and two were damaged. Nine Turkish schools were entirely destroyed, two were partially destroyed, and 14 were damaged. One barracks was entirely destroyed, and another was damaged. Additionally, one government house, one barracks, and one Redif warehouse were partially destroyed and damaged. Three telegraph offices were also partially destroyed and damaged.



Furthermore, three baths were completely destroyed, two baths were partially destroyed, and one bath was damaged. In a letter to the newspaper dated 3 April, the residents of Malatya reported that the rains that caused the flooding were continuing, the weather was cold, poverty was prevalent, and the financial aid received was insufficient. It was reported that the earthquakes persisted but were inconsequential. Additionally, it was noted that two hills had collided in an area eight hours away from Malatya, resulting in the destruction of a village and its inhabitants .

The Hayrenik Newspaper (published in Istanbul between 1870 and 1896; published as a daily political and commercial newspaper between 1909 and 1910) recorded three more earthquakes on Sunday, 3 March 1893. A significant number of structures damaged in previous earthquakes were completely destroyed in this latest incident. A commission was sent to Hisn-ı Mansur to prepare a report. According to the report, 200 houses in 19 villages of Hisn-ı Mansur were destroyed, 99 people were killed and 7 people were injured. Most of the remaining structures were destroyed due to bad weather conditions. At the time of writing, there was no concrete information about the extent of the disaster. Bad weather conditions had closed roads and collapsed bridges, preventing the return of officials sent to various regions. Therefore, reliable data on the earthquake had not yet been obtained.

The tremors in Malatya and its surroundings continued. On 22 March, approximately forty residential buildings and a barn were completely destroyed by a severe earthquake in Hisn-i Mansur and three settlements affiliated with it, and in Husma (later the district of Samsat). No casualties were reported. 20,000 Turkish Liras were sent to the victims from Diyarbakır. As detailed in the report of the special commission established on the disasters caused by the 17 April Malatya earthquake, a total of 885 people died, 164 were injured, and 7,262 rooms and 2,719 houses were completely destroyed. A total of 10,020 animals were lost under the rubble. A total of 31 mosques were completely destroyed, 95 were partially destroyed, and 13 were partially damaged.

The Demet newspaper, published in Istanbul between 1866 and 1908, reported on 6 March 1893 that numerous buildings, including houses, had been destroyed in an incident in Hisn-ı Mansur. A total of 22 fatalities and 2 injuries were identified among the ruins. In Arga, the administrative centre of Akçadağ district, the vast majority of buildings were destroyed, and a number of animals were found among the ruins. In two villages situated on the mountainside, 10 villagers were entombed beneath the rubble and perished. In Kahta, the walls of three houses collapsed, the walls of several others were damaged, and 125 people, comprising both men and women, were killed. Additionally, 279 houses were rendered uninhabitable, and 1,106 animals in 16 villages perished. Upon learning of the earthquake, Sultan Abdulhamit II promptly ordered the mobilization of resources and the immediate deployment of tents. A total of 55,000 kurus in the province of Kharpert and 46,000 kurus in the province of Diyarbakır were collected as aid, with an additional 5,000 Liras provided by order of the Sultan.(Mildanoğlu, 2020)

### **Assyrian Churches damaged by the earthquake and the problem of repairs**

The Assyrian Jacobite Church, like many other structures in the city, was damaged by earthquakes in 1893 and 1904. The Assyrians were unable to mobilize the financial resources needed to repair their church, which was damaged in the 1904 earthquake and whose northern wall collapsed. Despite this, they applied to the Elazığ province for permission to demolish and repair the collapsed wall of the church the following summer. The request was made by the religious leader Matran (DH.MKT.998/48). 154 Liras were collected for the reconstruction of the Church of St. Peter and Paul, built in 1845. The church, which was in a state of disrepair, was 25 meters high, 15 meters wide and 12 meters high. One striking aspect of their petition was the claim that the disrepair of their church was hindering the congregation's ability to worship and that they were increasingly inclined to convert to Catholicism.

As a result, permission was granted in 1906 on the condition that the dimensions of the building were not exceeded. However, the dimensions of the new church differed from the dimensions of the 1845 building (ŞD. 1490/8; İ.AZN. 68/47; BEO. 2950/221180). The current dimensions of the church are 16 meters long and 12.5 meters wide. The relevant document is in the Ottoman Archives with the inscription İ.AZN. As seen in documents numbered ŞD.1490/8, İ.AZN.68/47 and BEO.2950/221180, the total amount of financial aid collected from sixty-four donors is 245 Lira. The person who donated the most is Şamun, son of Toros, son of Kargözoğlu, who donated 90 Lira. It is also noteworthy that there are a significant number of people with Armenian names or surnames in the donor list. Among these are Hacur, son of Yusuf Ağa; Pirades Barsum; Barsum, son of Merchant Manu; Barsum Veledi Bedo; Merchant İsadör Makdis; and Bedros Veledi Yonan (İ.AZN. 68/47).

In April 1913, Assyrians living in the village of Venk, in the Taraksu district of Pütürge, submitted a petition for the reconstruction of their village church, which was fourteen meters long, eight meters wide and seven meters high. They cited the dilapidated condition of the church as the reason for the petition (MV. 233/60). In his petition, Assyrian Matran Abd Dunnur, the archbishop of Mamuret-ül Aziz and its surroundings, requested that the dilapidated church, which was 112 square meters in size, be renamed the Mar Eliyan/Mar Elbeyan Church. A total of 140 Assyrians resided in Venk and there were 39 households. The church, which was to be rebuilt for the local people to fulfil their religious duties, would be fourteen meters long, eight meters wide, and seven meters high on the aforementioned land. In addition, it was proposed to collect 13,594.60 Kuruş from the public through the state office (ŞD.1499/2). The government requested in its official letter that the nature of the land on which the church in the Venk/Vank village of the Taraksu district is located and the value of the proposed reconstruction should be investigated (ŞD. 1498/9). In the investigations conducted by the Taraksu District Director İbrahim Efendi and his delegation, a member of the Assembly Administration, it was determined that the value of the land on which the ruined church is located was 2,500 Kuruş. It was also determined that the building was old and leaned on a large rock on one side in the southeast of the village (ŞD. 1499/2). On May 2, 1914, the request of the Assyrians of the Vank/Venk village was approved. The Mor Petrus and Paul Church, located in the centre of Adıyaman and previously restored, was one of the religious structures damaged like many others in the 2023 earthquake.

### **The repair of the telegraph building**

After the 1906 earthquake, efforts were made to repair the damaged part of the telegraph office building. It is highly probable that this earthquake was the Elazığ earthquake that occurred at the same time. Despite all efforts to provide the necessary repairs, the building could not be repaired. An application was made to the Ministry of Post and Telegraph on 20 March 1909 for the repair of the Adıyaman telegraph office building that was damaged in the earthquake. The estimated cost of the repair was 5,880 Kuruş (DH.MKT. 2763/23; BEO.3520/263964; DH.MKT. 2779/94; ŞD.1161/45). On 12 January 1912, a 200-meter-long telegraph wire from the Adıyaman Telegraph Office had been stolen by two individuals whose identities were unknown. Despite the most meticulous investigation efforts, the identities of the perpetrators could not be determined (DH.İD.119/55). As previously mentioned, the damage to the telegraph building in the earthquake caused a disruption in communication with the central government, which unfortunately led to a delay in realizing the effects of the earthquake. In the 2023 earthquake, the widespread use of telephones for communication caused a temporary interruption in the flow of communication, which caused difficulties.

Similarly, the Adıyaman Government Building, which served as both a government and municipality building at the time, was also damaged by earthquakes. In 1905, a request for 503 Kuruş was made for the repair of the police department in this building (ML.EEM. 886/34). After the first tremors of the 2023 earthquake, the existing police station and Adıyaman municipality buildings were unfortunately demolished. The municipality moved to the section allocated to it in the existing governor's office building, while the police department is currently waiting for its own building to be completed, but it may move later.

### **Aid for the earthquake victims**

During an earthquake, it is of great importance to ensure the safety and well-being of those who are outside or rescued, and those trapped under the rubble. In this context, it would be useful to conduct a comparative analysis of the relief efforts following the 2023 earthquake with those conducted in 1893. This may help to shed light on the historical and cultural evolution of procedures related to seismic events. On 5 March 5 1893, Elazığ Governor Enis began to collect aid from charitable individuals and authorities in the city centre and other districts that were not affected by the earthquake (BEO. 165/12324). On 8 March 1893, there were intense debates on finding the most appropriate method of providing aid to those affected by the earthquake emerged. Nevertheless, the extent of the damage caused by the earthquake remained unclear. However, aftershocks of the earthquake continued intermittently during this period (MV. 74/31). On 6 March 1893, Abdulhamid transferred 300 Lira from his personal account through the Ziraat Bank to provide aid to those affected by the earthquake (BEO. 166/12379). Later, Ottoman authorities continued to provide aid to those affected by the earthquake. On 8 March, a promissory note of 21,000 Kuruş was sent, marking the beginning of a series of aid initiatives (Y.PRK.UM.26/63). In the following period, the seriousness of the situation became apparent and necessitated the government's appeal for aid following the earthquake. The first aid shipments began shortly thereafter

(Y.PRK.ŞH.4/23). In this context, aid was sent to Malatya from many parts of the country, especially from Trabzon, Manastır, Sakız and Jerusalem (DH.MKT.70/17; DH.MKT.60/35).

The 750,000 Kuruş collected in the aftermath of the Malatya earthquake was partially spent, resulting in a remaining balance of 540,000 Kuruş as of 4 September 1893. It was agreed that the remaining funds would be allocated to provide shelter and sustenance for the people of Malatya, Hisn-ı Mansur, and Besni, who were affected by the earthquake and faced the approaching winter.<sup>3</sup> A certain degree of ambiguity emerged in the subsequent period with regard to the precise destination of the funds collected. It would appear that the 376,871 kuruş remaining in the aid funds resulting from the Malatya earthquake were initially intended for the repair of educational, religious, and community facilities in the Malatya region. However, on 5 September 1894, this decision was revised, and it was decided that the priority should be given to the repair of the houses of those who had been exposed and devastated by the earthquake (MV.76/10). This decision indicates that the state was willing to consider the needs of citizens above those of official institutions and places of worship. This situation also offers insights into why repairs to social institutions such as churches, mosques, and schools were delayed.

After the earthquake several faced with the difficulty of rebuilding their lives, and also suffered from food shortages. Traditionally, people stored wheat and other grains and foodstuffs in the basements of their homes to provide enough food for the winter months. With the collapse of the houses, foodstuffs were also buried under the rubble. As a result, the people of Adıyaman, who lost their homes in the earthquake, had difficulty accessing foodstuffs after the disaster. In addition to the tents distributed from the barracks, new tents and cash were requested to be sent to meet the needs of those who migrated to open areas and rural areas as a result of the earthquake. It was predicted that this would provide significant benefits for those affected by the earthquake. (BEO 2718; 203824; Ürkmez, 2021: 976-986). A similar scenario was experienced in the earthquake on 6 February 2023. Debris removal efforts were disrupted in the first two days due to adverse weather conditions, especially rainfall, low temperatures, and snowfall. Citizens were unable to enter their homes and had difficulty accessing food due to aftershocks during the first two days of the earthquake.

In the first correspondence about the earthquake in the Kâhta region, it was seen that there was no significant damage in the central Kâhta region, unlike the situation in Adıyaman. However, the extent of the damage in the villages could not be determined at that time (BEO.164/12244). According to the records kept by the officers sent from Malatya to Kâhta, in the telegram sent on 12 March 1893, it was reported that there were breaches in the walls of the central telegraph office and that the telegraph devices were moved to another location because the office was in a dangerous condition to live in. In the first assessment of the situation in Kâhta, it was seen that the walls of three houses had collapsed, and the walls of some houses were damaged. It was also understood that a significant amount of stone had been extracted from the castle and the mountainous area around it and brought to the centre. Although it is pleasing that there was no loss of life in the centre of Kahta, it was understood that 125 people were trapped under the rubble, 279 houses were destroyed, and 1,106 animals died in 16 villages (Y.A.HUS. 271/46; Ürkmez, 2021: 976).

In the initial period following the earthquake at 04:17 in 2023, it was difficult to maintain telephone and other communication lines with the outside world. However, as the morning fog gradually cleared and the surroundings became brighter, the full extent of the destruction became apparent. The situation was difficult, and the most urgent concerns were the provision of food, drinking water, and other basic needs. The transportation of the injured to medical facilities was hampered by the presence of high-rise buildings along the primary exit routes. Regrettably, precipitation in the form of rain and snow added to the overall weight of the rubble, thus making the situation worse for those trapped under it. The following day, the weather worsened further, with colder temperatures and frost reducing the chances of survival for those who were trapped under the rubble and leading to an unfortunate increase in the mortality rate. Unfortunately, Adıyaman province did not receive the attention it deserved from the authorities at a time when the country was dealing with other provinces experiencing earthquakes. In light of the data mentioned above, it seems reasonable to assume that the negative effects of the earthquake in the Ottoman period were also reflected in the 2023 earthquake.

In the first period following the Malatya earthquake, the Ottoman Empire did not keep comprehensive records of the distribution and recipients of aid. This lack of transparency continued until August. On 3 August 1893, records were requested detailing the expenditure of aid provided. DH.MKT.124/31 (3 August 1893).

After the 2023 earthquake, no such records were initially kept due to the extensive damage. Indeed, in the first period following the earthquake, the humanitarian aid was distributed without any clear criteria or targeting leading to a misallocation of resources. Later, efforts were made to organize aid distribution and to establish some order to take advantage of the opportunities provided by human resources and technology. From the perspective of someone who lived in a region exposed to seismic activity and witnessed the earthquake, one of the most significant challenges was the scarcity of food and other essential supplies for the personnel sent to the area. As a result, the personnel in question had to use the supplies sent to the earthquake zone, which led to the waste of these resources. In such emergencies and disasters, it would be more appropriate for the relevant personnel to be equipped with their own food and shelter materials. The Turkish Armed Forces have been particularly well-equipped and prepared to provide shelter compared to other official and voluntary organizations.

### **Building control housing problem overview**

The people of the region felt the effects of the 1893 earthquake for a long time, and the deficiencies could not be repaired. In particular, the damage to houses caused great difficulties for the inhabitants in terms of shelter. This situation preoccupied the authorities for a long time, and on 5 September 1894, it was requested that the remaining part of the aid money received for the earthquake be used for the repair of the dwellings (MV.81/37, 5 September 1894). After the earthquake, the Ottoman Empire asked the municipalities to check the buildings and houses that were in danger of collapsing. This was because in July 1893, a wedding house collapsed

in Adıyaman and a church and an inn suddenly collapsed in Malatya/Arapkir, killing people under the rubble (ŞD.2618/41) (18 July 1893). After this date and order, it is understood that the control and licensing of buildings in the cities should be controlled by the municipalities. From the Republican period until the 2023 earthquake, there have been many reports about the lack of licenses in many collapsed buildings and the lack of building inspections by the municipalities. This situation is the reason for the collapse of many buildings during earthquakes. The 2023 earthquake also revealed this reality in Adıyaman.

The city hospital, located at one end of the city, was rendered inaccessible by the collapse of residential buildings on the main roads affected by the earthquake. As a result, a significant number of people in need of medical care were unable to receive the necessary care. In the relatively short time since the earthquake, the full extent of the damage has become unclear due to the ongoing effects of the seismic event. Contrary to the previous decision that buildings should be four or five stories high due to the liquefaction of the city's ground and the liquefaction of earthquake fault lines, the owners of buildings on the boulevard, and especially those who own high-rise apartments, ignored this situation and tried to return to their previous positions. Indeed, a significant number of those who attended the meeting on November 23, 2002, when Mehmet Özhasaki, Minister of Environment and Urbanization of the Republic of Türkiye, expressed his concern about the earthquake, expressed a desire to build high-rise buildings outside the city along the road leading to the hospital. At that very moment, the 5.2 magnitude earthquake caused widespread panic. (Cumhuriyet, 23 November 2023, 1)

Despite the earthquake warning, however, the property owners insisted on requesting higher floors. As a result, the restriction on the number of floors in existing buildings was lifted in order to reduce the devastating effects of the earthquake. However, the aim of the numerous meetings attended by the Minister and many bureaucrats was to ensure that the buildings in the city were earthquake-resistant and to minimize the loss of life in the event of an earthquake. Similarly, prior to the 1 March 2023 Adıyaman mayoral election, the current Mayor Dr Süleyman Kılıç and the later elected Mayor Abdurrahman Tutdere argued that the number of floors permitted in Adıyaman Municipality's zoning plans and projects should be limited to five and that these plans should be revised accordingly. The fact that both mayors considered the concerns of the voters, and the influence of their supporters meant that the creation of a new city zoning plan was prevented. This situation shows the prioritization of political interests over the value of human life. This situation points out the potential for the emergence of significant difficulties and psychological distress in the city and its development in the coming years.

As in 1893, the 2023 earthquake caused extensive damage to housing, making it uninhabitable. In the early stages of the earthquake, the state tried to solve the housing crisis by distributing tents to the affected population, similar to what the Ottoman Empire did. However, this temporary measure was not enough to meet the needs of those in need. As a result, container houses, which were more durable than tents, were built in suitable parts of the city, and small towns were established. Infrastructure such as electricity, sewage, and water were provided in these small container cities. Those who had financial means and



property in the form of vineyard houses took shelter in these structures. Similarly, those who had houses or relatives in the village took shelter in single-story houses there. The earthquake caused a partial migration from urban areas to rural areas to some extent. In urban areas, the government distributed social assistance cards to every person who lost their residence outside the designated container cities. For those whose houses were destroyed or significantly damaged, the state provided 15,000 Liras for moving expenses in the first year and 5,000 Liras for rental expenses.

Later, the rent allowance was increased to 7,500 TL. In addition, a financing mechanism was established for the reconstruction of the demolished houses, consisting of 750,000 grants and 750,000 loans. In this sense, it can be argued that the state is trying to solve the housing problem by learning from past experiences and taking responsibility as well as aiding to meet the housing needs of the people. However, the ownership and inheritance of the houses to be rebuilt on site continues to be a significant point of contention in the wider society. In addition, the high wage expectations of personnel working in repair and construction activities in the earthquake-affected areas, combined with the shortage of qualified construction workers, contribute to the housing-related complaints of those affected by the earthquake.

### **Conclusion**

The magnitude and destructive power of the two earthquakes in Maraş on 6 February 2023 are very similar to the 1893 earthquake in terms of their effects and the extent of the damage they caused. Like the 1893 earthquake, the 6 February 2023 earthquake also resulted in the collapse of the municipality building. Following the earthquake, a series of other disasters occurred in the region, and the people suffered from significant losses. The practice of lifting or postponing taxes after natural disasters, which has been applied by states throughout history, was implemented once again in the 2023 earthquake. Following the earthquake, humanitarian aid was mobilized from the Balkans, Syria, Palestine, and the Ottoman province of Basra and sent to the affected people. Minority and missionary groups also played a role in these relief efforts. Following the 2023 earthquake, people from all over the world flocked to the affected region, offered aid, and provided large amounts of aid, especially food. Some groups, who had previously demonstrated a consistent and sensitive approach to solidarity and assistance, moved away from these principles during the events.

Among the casualties of the earthquake were the young athletes from the Turkish Republic of Northern Cyprus (TRNC) who were visiting the city. The deaths of the young TRNC athletes attracted the attention of the national and international community to the earthquake and Adıyaman. Furthermore, it demonstrated the detrimental effects of undertaking building renovations without due consideration of the pertinent zoning plans.

As was the case on 2 March 1893, the rain that fell after the earthquake negatively affecting the rescue efforts and causing several earthquake victims remain trapped under the rubble. Unfortunately, state institutions were late in realizing the situation in Adıyaman due to the conditions they were in. Indeed, a similar scenario occurred after the 6 February earthquake, and the true extent of the destruction only became apparent a few days later.

Unlike the situation in other provinces, AFAD officials were only able to reach Adıyaman at around 8 a.m. the next day. During this time, people who could not enter their homes tried to keep warm by burning the rubble and trying to rescue their relatives who were trapped under the rubble. In addition, the earthquake caused damage in the provinces surrounding Adıyaman, and the deterioration of roads and disruption of transportation also had a significant impact.

During this period, the earthquake caused significant damage to the city's infrastructure, and basic services such as bakeries were disrupted due to the devastating effects of the earthquake. This situation caused significant difficulties for the city in terms of food security. As a result, the lack of access to necessities such as bread and water became a significant challenge following the 2023 earthquake. In order to prevent such challenges in the future, it would be beneficial to make a water well or tank mandatory at each site. Bakeries should be located in pre-determined locations to provide a source of bread in emergencies. Finally, to meet the need for sanitation and prevent the spread of diseases, common toilet facilities should be built in the garden areas of site-type settlements.

Adverse weather conditions and the subsequent frost caused the deaths of those trapped under the rubble; this fate is reminiscent of those who lost their lives in similar conditions 130 years ago. It has been claimed that the AFAD centre in the region was also affected by these deficiencies and failures and lost some of its personnel in the earthquake. However, the unpreparedness of state institutions was as effective as the severity of the earthquake in these failures. Indeed, this situation became concrete when the President Recep Tayyip Erdoğan apologized to the people of Adıyaman on 27 February. It was announced in television broadcasts that aid programs would be implemented to repair the damage caused by the earthquake and to deliver aid to the affected people. A large number of ministers, governors and district governors were assigned to provide aid to those affected by the earthquake. However, the magnitude of the earthquake and the wideness of the affected area posed significant challenges for the delivery of aid and reconstruction efforts. An examination of the consequences of both earthquakes revealed that the most important triggering factors were the poor quality of construction materials and the lack of effective coordination in the disaster area. An examination of seismic events occurring in the vicinity of Adıyaman reveals a striking similarity in their physical effects. The combined effects of human negligence and the destructive forces of nature have served to exacerbate these negative outcomes.

The earthquakes of 1839 and 2023 caused great destruction and loss of life in Adıyaman and its surroundings, once again demonstrating the region's vulnerability to seismic risks. The difficulties experienced following the earthquakes and the disruptions in relief efforts have highlighted the need for better planning and preparation to cope with similar disasters in the future. In general, it is predicted that seismic events occurring at different times will have different intensities and destructive effects due to temporal and technological differences. However, the analysis of the data related to the earthquakes in question revealed that there was very little change other than temporal and technological differences.

The architectural style commonly seen in Adıyaman during the Ottoman period was characterized by single-story buildings with clay roofs. While technical deficiencies negatively affected rescue efforts, the prevalence of multi-story, reinforced concrete buildings and construction errors have similarly hindered the rescue process. In both historical periods, the limitations of human capacity and the general characteristics of the building materials have been the most important factors resulting in the inability to withstand the destructive forces of nature. Despite the constant recurrence of earthquakes throughout history in our country, we observed that no lessons have been learned from these events and no preparations have been made. The country and its people have, in a sense, gotten used to earthquakes and accepted them as a natural phenomenon. As a result, the society was caught unprepared by the sudden and severe earthquake in 2023. The data presented in this study clearly demonstrates this situation and is important in terms of showing that the society in question lacks an earthquake culture despite experiencing dozens of earthquakes.

### Endnotes

- 1 The number of wounded in these documents is given differently by Naim Ürkmez in his study.
- 2 It was previously thought that the mosque could be repaired with the help of the public. However, after further investigations, it was realised that the public would not be able to collect this amount. See. BEO.565/42312. In the previous pages, it was stated that this mosque was called Alaüddevle Mosque. However, it is seen that it is also referred to as Sultan Alaaddin Mosque in recent documents.
- 3 The minaret of Adıyaman Ulu Cami, which was repaired in 1832, was repaired by Hacı Molla.

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## References

### First and Secondary Sources and Electronic Sources

- Abulfedae, *Abulfedae Annales Mvslemici Arabice Et Latine*, Tomfs IV.
- Alboyacıyan, A. (2020). *Malatya Ermenileri: coğrafya, tarih etnoğrafya*, (S. Malhasyan, tr.) Aras.
- Altın, A. (2016). Geçmişten günümüze Adıyaman Ulu Camisi. *Adıyaman Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 8(24), 1224-1268.
- Barnum, H.N. (1893 April 20). Earthquake in eastern Turkey. *The Independent*, pp.5,16.
- Başkumandan Simbat, (n.d.). *Başkumandan Simbat Vekayinamesi*, (H.D. Andreasyan, tr.) Unpublished, TTK.
- Berk, B. (2018). 246 Numaralı Adıyaman kadı sicili ( H.1329/M.1911 ) 71-140 Sayfalarının Transkripsiyonu ve Değerlendirmesi [Yayımlanmamış Yüksek Lisans Tezi] T.C. Adıyaman Üniversitesi, Sosyal Bilimler Enstitüsü, Tarih Anabilim Dalı.
- Bulut, L. (2000). *Samsat Ortaçağ Seramikleri (Lüster ve Sıratlılar)* Ege Üniversitesi Edebiyat Fakültesi Yayınları.
- Cumhuriyet* (2023). 23 November, 1.
- Dalyan, M.G., (2023). *Kommagene'den Hısn-ı Mansur'a Adıyaman Tarihi (1.Cilt)*. Asos.
- "Editorial Paragraphs", (1893). *The Missionary Herald*, LXXXIX. August, VIII., 304-344.
- "Editorial Paragraphs", (1893). *The Missionary Herald*, LXXXIX. V, 171-214.
- "Editorial Paragraphs", (1894). *The Missionary Herald*, Vol. XC, XII, pp.509-550.
- Eger, A. A. (2017). *The Islamic-Byzantine Frontier Interaction and Exchange Among Muslim and Christian Communities*, I.B. Tauris.
- Emre, Ö., Duman, T. Y., Özalp, S., Şaroğlu, F., & Olgun, Ş. (2013). *Türkiye diri fay haritası*. Maden Tetkik ve Arama Genel Müdürlüğü (MTA).
- Gibb, S.H.A.R. (1969). *Career of Nur-ad-Din: a history of the crusaders*. K. M. Setton (Ed.) Volume I, University of Wisconsin Press, pp: 513- 527.
- Gökgedik, E. (2011). 239 Numaralı Adıyaman kadı sicili (H.1329-1333/M. 1911-1915 ) 1-105. Sayfalarının Transkripsiyon ve Değerlendirilmesi, [Yayımlanmamış Yüksek Lisans Tezi] T.C. Kahramanmaraş Sütçü İmam Üniversitesi Sosyal Bilimler Enstitüsü Tarih Ana Bilim Dalı.
- Gökhan, İ. (2016). Türkiye Selçukluları zamanında Maraş Uç Beyliği, *Selçuklu Medeniyeti Araştırmaları Dergisi*, 1 (1), 115-171.
- Gregory Abu'l Farac, (1998). *Abul Farac (Barhebraeus) Tarihi*, I, (. Ö. R. Doğrul, tr.) TTK. I. ve II. Haçlı Seferleri Vakayinamesi, (2005). (V. İlmen, tr.) Yaba.
- İbnü'l Erzak (1992). *Meyyâfarikin ve Amid tarihi (Artuklular Kısmı)*. (A. Savran, tr.) Atatürk Üniversitesi.
- İbnü'l- Esir (1991). *El-kâmil fit-târih tercümesi*, 10. (A. Özaydın, Tr.) Bahar.
- İşık, A. (1998). *Malatya 1830-1919*. Kurtip Matbaacılık.
- Kopruman, Y. (1966). Nureddin'in faaliyeti, *Tarih Araştırmaları Dergisi*, 4(6), 505-520.
- Longden, R.P. (1931). Notes on the parthian campaigns of trajan. *The Journal of Roman Studies*, 21, 1-35.
- Matti M, (Tr., with an introduction ).(2014). *The Syriac chronicle of Michael Rabo (The Great) a universal history from the creation*. Beth Antioch Press.

- Michaud, J. F. (1855). *The History of The Crusades*, V. I. (W. Robson, tr.) Redfield.
- Mildanoğlu, Z. (17.05.2020). 1893 Malatya depremi bize ne anlatıyor?, *Agos Gazetesi*, <http://www.agos.com.tr/tr/yazi/23551/ermenice-basinda-1893-malatya-depremi>
- "Notes On Other Missions" *The Church Missionary Intelligencer*, (1893). XLIV., XVIII. New Series, 706-708.
- Öztürk, S. (2006). *Osmanlı salnamelerinde Adıyaman 1286-1325/1869-1908*. Adıyamanlılar Vakfı. *Portland Daily Press*, 2 August 1893, 1.
- San, S. (1950). *Her bakımdan kısaca Besni*. Güven Matbaası.
- Satılmış, S. (2016). 1893 Malatya Depremi ve afet yönetimi. *OTAM Ankara Üniversitesi Osmanlı Tarihi Araştırma ve Uygulama Merkezi Dergisi*, 39, 137-177.
- Satılmış, S. (2019). *Osmanlı Devleti'nde afet yönetimi*. İdeal Kültür.
- Satılmış, S. (2023). Birinci el kaynaklara göre Elazığ'ın tarihsel depremleri (1863-1900), *Tarih ve Gelecek Dergisi*, 9(4), 697-714.
- Satılmış, S. (2023). Malatya tarihinde depremler (1890-1910), *İnsan-Mekân-Medeniyet Malatya*, Sonçağ.
- Sbeinati, M.R., R. Darawcheh., M. Mouty. (2005). The historical earthquakes of Syria: An analysis of large and moderate earthquakes from 1365 B.C. to 1900 A.D., *Annals of Geophysics*, Vol. 48, N. 3, June, 347-435.
- Süryanî Mihael, (n.d). Vekâyi'nâme, I, (H. Andreasyan, tr.) Unpublished manuscript, TTK.
- Süryanî Mar-Yeşua, (1958). *Vakayi'Name (The Cronicle of The Stylite)*. (W. Wright, tr. to English; M. Yanmaz, tr. from English to Turkish) Şehir.
- Taşkın, Ü. (2018). Osmanlı Devleti'nin son yıllarında Palu'da tabii afetler (1858-1910), *Fırat Üniversitesi Harput Araştırmaları Dergisi*, V(2) 73-83.
- Taşkın, Ü., (2020). "XIX. yüzyılın ikinci yarısında Hısn-ı Mansûr Kazası'nda (Adıyaman) Doğal Afetler", *Tarihte Adıyaman Devlet, Toplum ve Kültür*, (pp. 172-178) Sonçağ.
- Tunç, M.N. (2019). *Hurûfât Defterleri'ne Göre Hısn-ı Mansur (Adıyaman) Kazası*, Kitabevi.
- Urfalı Mateos (2000). *Vekayi-nâme ve Papaz Grigor'un Zeyli*. (H. Andreasyan, tr.) TTK.
- Ürkmez, N. (2021). Osmanlı Devleti'nde bir toplumsal dayanışma örneği: 1893 Malatya Depremi, *Uluslararası Sosyal Araştırmalar Dergisi*, 9(43), 101-128.
- Vardan, M. (1937). *Türk fütuhât tarihi (889-1269)*, İstanbul Edebiyat.
- Wallace-Hadrill, D.S. (1982). *Christian Antioch: A study of early christian thought in the east*. CUP.

## Archival Sources

### Ottoman Archives - Presidency of the Republic of Türkiye Directorate of State Archives

#### Bab-ı Âli Evrak Odası Evrakı:

- BEO.208/15547 (25 May 1893).  
BEO.164/12244 (3 March 1893).  
BEO.165/12324 (5 March 1893).  
BEO.167/12475; (8 March 1893).  
BEO. 170/12688 (13 March1893).  
BEO. 2718;203824 (10 January 1906).  
BEO.177/13215 (26 March 1893).  
BEO. 170/12688 (13 March 1893).  
BEO. 166/12379 (6 March 1893).  
BEO.565/42312 (5 February 1895).  
BEO.297/22225 (20 October 1893).  
BEO.1195/89569 (15 September 1898).  
BEO. 880/65994 (11 January 1897).  
BEO.3520/263964 (24 March 1909).  
BEO. 4281/321040 (30 April 1914).  
BEO.2950/221180 (26 December 1906).

#### Şûrâ-yı Devlet:

- ŞD.129/32 (14 February 1894).  
ŞD.1161/45 (22 March 1909).  
ŞD.2656/5 (31 July 1895).  
ŞD.1490/8 (11 August 1906).  
ŞD.1499/2 (27 January 1914).  
ŞD. 1498/9 (09 November 1913).  
ŞD.2618/41 (18 July 1893).

#### Yıldız Sadâret Hususi Maruzat Evrakı:

- Y.A.HUS.270/111 (6 March 1893).  
Y.A.HUS.274/40 (4 May 1894).  
Y.A.HUS.278/20 (16 July 1893).  
Y.A.HUS.279/204 (11 September 1893).  
Y.A.HUS.279/64 (23 August 1893).  
Y.A.HUS.286/55 (17 December 1893).  
Y.A.HUS.286/94 (21 December 1893).



Y.A.HUS. 286/11 (10 December 1893).

Y.A.HUS. 309/100 (30 September 1893).

Y.A.HUS. 271/63 (13 March 1893).

Y.A.HUS. 271/46 (12 March 1893).

Y.A.HUS. 278/43. (22 July 1893).

**Yıldız Mütenevvi Mâruzât Evrakı:**

Y.MTV.75/118 (5 March 1893).

Y.MTV.75/128 (7 March 1893).

Y.MTV.75/106 (4 March 1893).

Y.MTV. 76/81 (1 April 1893).

**Yıldız Perakende Evrakı Sadâret Mâruzâtı:**

Y.PRK.A. 8/61/6 July 1893).

**Yıldız Perakende Evrak-ı Umumi:**

Y.PRK.UM.26/63 (9 March 1893).

**Yıldız Perakende Evrakı Şehremaneti Maruzatı:**

Y.PRK.ŞH.4/23 (11 March 1893).

**Meclis-i Vükelâ Mazbataları:**

MV.74/31(08 March 1893).

MV.76/10 (11March 1893).

MV. 233/60 (31 January 1914).

(MV.81/37. (5 September 1894).

**Dahiliye Nezâreti Mektubî Kalemi:**

DH.MKT. 48/27 (2 June 1893).

DH.MKT. 1/39 (13 March 1893).

DH.MKT.70/17 (21 June 1893).

DH.MKT.60/35 (7 June 1893).

DH.MKT. 339/8 (31 January 1895).

DH.MKT. 2763/ 23 (10 March 1909).

DH.MKT. 2779/94 (29 March 1909).

DH.MKT.998/48 (18 August 1905).

**Dahiliye Nezâreti İdare Evrakı:**

DH.İD.119/55 (24 January 1912).

**İrade Adliye ve Mezâhib:**

İ.AZN. 68/47 (19 September1906).

İ.AZN.115/50 (3 February 1914).

**Dahiliye İdare:**

DH.İD. 162/37 (2 May 1914).

**İrade Dahiliye:**

DH. İD. 162/5 (21 September 1912).

**Maliye Nezâreti Emlak-ı Emiriye Müdüriyeti:**

ML.EEM. 886/34 (19 March 1900).



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