# **Accepted Manuscript (Uncorrected Proof)**

Title: The Psychological Impact of Losing Pets in the 2023 Antakya Earthquake

**Authors:** Hossein Salehi<sup>1</sup>, SiminTaj Shaififar<sup>1,\*</sup>, Sakineh Sharifian<sup>2</sup>, Arasb Dabbagh Moghddam<sup>3</sup>, Saeed Nazari<sup>1</sup>, Hamid Karimi Kivi<sup>4</sup>

- Department of Health in Disasters and Emergencies, Aja University of Medical Sciences, Tehran, Iran.
- 2. Nursing and midwifery care research center, Iran University of Medical Sciences, Tehran, Iran.
- 3. Infectious Diseases Research Center, Aja University of Medical Sciences, Tehran, Iran.
- 4. Urmia University medical science, Miandoab School of medical sciences, Urmia, Iran.

To appear in: Health in Emergencies & Disasters Quarterly

**Received date: 2024/09/21** 

**Revised date:** 2025/12/01

**Accepted date:** 2025/12/06

First Online Published: 2025/12/10

This is a "Just Accepted" manuscript, which has been examined by the peer-review process and has been accepted for publication. A "Just Accepted" manuscript is published online shortly after its acceptance, which is prior to technical editing and formatting and author proofing. *Health in Emergencies & Disasters Quarterly* provides "Just Accepted" as an optional and free service which allows authors to make their results available to the research community as soon as possible after acceptance. After a manuscript has been technically edited and formatted, it will be removed from the "Just Accepted" on Website and published as a published article. Please note that technical editing may introduce minor changes to the manuscript text and/or graphics which may affect the content, and all legal disclaimers that apply to the journal pertain.

#### Please cite this article as:

Salehi H, Shaififar S, Sharifian S, Dabbagh Moghddam A, Nazari S, Karimi Kivi H. The Psychological Impact of Losing Pets in the 2023 Antakya Earthquake. Health in Emergencies & Disasters Quarterly. Forthcoming 2026. Doi: http://dx.doi.org/10.32598/hdq.2026.545.2

### Abstract

**Background:** Companion animals serve as crucial emotional anchors for humans, particularly in times of crisis. The 2023 Antakya earthquake in Turkey caused not only extensive human casualties and infrastructure destruction However; disasters not only claim human lives but also lead to the loss or forced separation of large numbers of companion animals. Although the importance of the human–animal relationship is increasingly acknowledged in disaster psychology, the emotional and psychological consequences of losing a pet during such events are still not well explored.

**Material&Methods:** This qualitative phenomenological study was conducted between February and March 2023 in Antakya, Turkey. Participants were purposively recruited from families who received assistance at mobile veterinary clinics operated by Iranian relief teams. Ten individuals who had lost their companion animals were interviewed using semi-structured guides. Data were analyzed thematically following Colaizzi's method to identify the core meanings of their lived experiences.

**Results:** Analysis revealed three overarching themes: 1. Emotional devastation and grief parallel to human loss participants described intense sadness, guilt, and helplessness comparable to human bereavement; 2. Disruption of daily identity and coping mechanisms the loss of routine caregiving and emotional connection led to feelings of purposelessness and psychological disequilibrium; and 3. Perceived social misunderstanding and isolation participants felt their grief was dismissed or trivialized, exacerbating emotional distress and social withdrawal.

**Conclusion:** Pet loss during disasters represents a neglected yet significant dimension of human suffering, manifesting as disenfranchised grief. Recognizing and addressing this form of bereavement within disaster mental health frameworks is essential. Integrating animal-related grief support into psychosocial interventions may mitigate long-term trauma and foster more compassionate and resilient post-disaster recovery.

**Keywords:** Disaster psychology; Companion animals; Pet loss; Grief; Phenomenology; Earthquake; Antakya 202

### Introduction

Natural disasters constitute some of the most profound disruptors of human and social life, leading not only to physical destruction and population displacement but also to widespread psychological distress (1, 2). Within disaster psychology, emotional suffering after the loss of loved ones, homes, or livelihoods has been widely investigated; however, the psychological implications of losing companion animals have received comparatively limited scholarly attention (3, 4).

For a large number of people, pets function as essential family members, offering emotional comfort, social support, and adding routine and stability to everyday living. Their sudden loss during a disaster can trigger a complex form of bereavement that may parallel—and in some cases surpass—the grief experienced after human loss(5, 6). The devastating earthquake that struck Antakya, Turkey, in February 2023, with a magnitude of 7.8, resulted in immense human casualties and the collapse of both urban and rural infrastructures(7). Alongside the human tragedy, thousands of animals—particularly pets such as dogs and cats—were lost, injured, or separated from their owners. For many families who survived, the loss of their pets was described as a "second disaster," representing the rupture of their pre-disaster identity and emotional world(8).

Despite the growing global recognition of the human—animal bond in mental health, few empirical studies have examined how pet loss in disaster contexts contributes to psychological distress or post-traumatic stress(9, 10). Existing evidence suggests that the grief of pet owners is often **disenfranchised** socially unacknowledged or invalidated because cultural norms tend to prioritize human loss(11). This may result in prolonged emotional suffering, guilt, and social withdrawal, particularly in collectivist societies where emotional expression is often constrained (12, 13). Moreover, post-disaster psychosocial interventions rarely consider the needs of individuals mourning their animal companions, leaving them underserved in both humanitarian and clinical frameworks. The absence of veterinary—psychological collaboration in disaster response planning further deepens this gap(14).

The 2023 Antakya earthquake thus provides a distinctive context to examine these dynamics, as it represents one of the rare disasters in which both veterinary and psychological relief teams operated jointly in the field. Exploring the lived experiences of pet owners who endured the loss of their animals during this catastrophe may yield valuable insights into the nature of grief, trauma, and resilience in post-disaster life.

Therefore, this research sought to investigate the psychological experiences and underlying meanings related to losing companion animals during the 2023 Antakya earthquake, employing a phenomenological approach to capture the depth and complexity of this understudied dimension of disaster-related grief.

## **Material & Method:**

A qualitative phenomenological approach was employed to examine the lived psychological experiences of people who lost their companion animals in the 2023 Antakya earthquake. This methodology was selected because phenomenology enables a deep exploration of how individuals interpret their emotional distress and reconstruct their sense of self in the aftermath of loss.(1, 2).

## Study Setting and Period

The study was conducted between February 15 and March 30, 2023, in Antakya, Turkey one of the region's most severely affected by the earthquake. Data collection took place at temporary shelters and mobile veterinary clinics operated by Iranian humanitarian teams in collaboration with local veterinary volunteers.

# Participants and Sampling

Participants were recruited through purposive sampling to ensure the inclusion of individuals who had directly experienced the loss of a companion animal. The eligibility requirements were as follows:

- 1. being 18 years of age or older;
- 2. having owned at least one dog or cat before the earthquake;
- 3. having experienced the confirmed loss or separation of that animal during the event; and
- 4. being willing to discuss their personal experiences. Of the 63 people assessed for eligibility, 10 met all inclusion criteria and agreed to participate by providing informed consent.

# Data Collection

Data collection was carried out using semi-structured, in-depth interviews that ranged from 45 to 70 minutes in duration. All interviews were conducted face-to-face in Turkish with the assistance of bilingual interpreters, and audio recordings were obtained with participants' consent. The interview protocol explored several core areas, including emotional responses to losing pet, coping strategies, perceptions of social support, and disruptions to daily routines. Field notes were also compiled to document contextual details, non-verbal behaviors, and the researcher's reflections.

#### **Ethical Considerations**

Ethical clearance for the study was secured from the institutional review board of the partnering university before any data were collected. All participants received detailed information about the study's aims, were reminded that they could discontinue participation at any stage, and were assured that their data would remain confidential. To protect privacy, pseudonyms were assigned in all interview transcripts. Given the emotionally sensitive nature of discussing pet loss, supportive measures were made available to any participants who experienced distress during the interview process. Data Analysis

Data were transcribed verbatim and analyzed using Colaizzi's seven-step phenomenological method(15). The analysis followed a systematic sequence that included:

- 1. reading all transcripts repeatedly to obtain a comprehensive understanding of the data;
- 2. extracting statements of particular relevance;
- 3. interpreting these statements to develop underlying meanings;
- 4. grouping the meanings into thematic categories and clusters;
- 5. producing detailed descriptive accounts;
- 6. synthesizing these descriptions into an essential structure of the phenomenon; and
- 7. Confirming the accuracy of the interpretations through member checking with participants.

Manual coding was conducted independently by two researchers to strengthen analytical credibility, with any disagreements addressed through collaborative discussion. In addition, reflexive journaling and peer debriefing were employed to support the study's trustworthiness and transparency.

### Results

The analysis generated three major themes and seven corresponding subthemes that captured the essence of participants' psychological experiences after losing their companion animals in the 2023 Antakya earthquake. (Table 1).

#### Theme 1: Emotional Devastation and Grief Parallel to Human Loss

Participants consistently described their pets as integral members of the family whose deaths evoked intense emotional pain, guilt, and trauma. For many, the grief of losing a pet was indistinguishable from the grief of losing a human relative.

"When I realized my cat was buried under the rubble, I cried like I had lost my own child. People told me to be thankful I was alive, but my heart felt empty." (Participant 4)

Several participants also reported experiencing **survivor's guilt**, questioning their inability to save their animals during the chaos of the earthquake. Feelings of helplessness and intrusive memories—such as recalling the sounds or images of trapped pets—were common. Some described sleep disturbances, nightmares, and ongoing emotional numbness.

"Every night I hear the sound of my dog barking for help in my dreams. It's like he's still trapped somewhere, calling me." (Participant 7)

# Theme 2: Disruption of Daily Identity and Coping Mechanisms

The loss of pets disrupted participants' sense of self, daily structure, and sources of comfort. Caring for their animals had provided stability and purpose in daily life; their absence created a void that intensified the trauma of displacement and uncertainty.

"Before the earthquake, I woke up early every morning to feed and walk my dog. After losing him, my days became meaningless. I stopped talking to people and lost interest in everything." (Participant 2)

Many participants reported that their pets had served as emotional buffers against loneliness and anxiety. Their absence amplified feelings of detachment, depression, and loss of identity, especially among those who lived alone. This disruption of normal coping mechanisms hindered psychological recovery.

"He was my reason to get through the day. Without him, even surviving feels pointless." (Participant 6)

## Theme 3: Perceived Social Misunderstanding and Isolation

A recurrent experience among participants was the **social invalidation of their grief**. Several described how relatives, neighbors, or even aid workers minimized their pain, suggesting that "it was just an animal." This lack of empathy deepened emotional distress and created a sense of alienation.

"People said, 'It was only a cat, you can get another one.' But for me, she was part of my family. Their words made my pain even worse." (Participant 9)

The absence of institutional or community recognition for pet-related grief further reinforced isolation. Participants expressed the need for acknowledgment from both

humanitarian organizations and mental health professionals that animal loss is a legitimate form of bereavement.

"If they had asked about our animals, maybe I would have felt that my pain mattered too." (Participant 1)

Overall, the findings reveal that the loss of pets during the Antakya earthquake constituted a multilayered psychological trauma combining grief, guilt, and disenfranchisement. Participants experienced an internal conflict between personal attachment and societal expectations, which limited their access to emotional validation and support.

**Table1.** Themes, subthemes, and illustrative quotes describing psychological responses to pet loss during the 2023 Antakya earthquake

Theme	Subthemes	Description	Illustrative Quotes
Emotional devastation and grief parallel to human loss	Emotional pain, guilt, intrusive memories	Pet loss evoked grief, guilt, and trauma comparable to losing human relatives.	"I cried like I had lost my own child." (P4) "I still hear my dog barking in my dreams." (P7)
Disruption of daily identity and coping mechanisms	Loss of routine, emptiness, loss of purpose	Pets gave structure and comfort; their absence caused emptiness and d	After losing him, my days became meaningless." (P2) "Without him, even surviving feels pointless." (P6)
Perceived social misunderstanding and isolation	Social invalidation, lack of recognition	Grief was dismissed by others, leading to alienation and emotional isolation.	It was only a cat, they said—but she was family." (P9) "If they had asked about our animals, my pain would have mattered." (P1)

## **Discussion**

This study examined the psychological consequences of losing companion animals during the 2023 Antakya earthquake using a phenomenological approach. The findings revealed three interconnected dimensions of experience among affected pet owners: profound emotional devastation, disruption of personal identity, and pervasive social invalidation. Collectively, these results emphasize that pet loss in disasters represents a form of disenfranchised grief—a deeply distressing yet socially unacknowledged psychological response that may equal or even surpass the intensity of grief following human loss.

The first theme, **emotional devastation and grief parallel to human loss**, corresponds with previous research indicating that companion animals often occupy kin-like emotional roles within families (1, 2). The strength of this attachment can make their sudden loss during disasters particularly traumatic, evoking symptoms consistent with complicated grief, survivor's guilt, and post-traumatic stress (3, 4). Comparable observations were documented after the 2011 Tōhoku earthquake in Japan, where survivors described pet loss as "losing part of oneself"(5). Consistent with these findings, narratives from Antakya participants revealed that pets serve not only as companions but also as sources of emotional regulation, attachment security, and existential meaning elements essential to post-disaster psychological adjustment (6).

The second theme, **disruption of daily identity and coping mechanisms**, underscores how pet ownership structures daily routines that provide stability and purpose. The abrupt loss of these routines left survivors experiencing emptiness, purposelessness, and a sense of disconnection. This observation aligns with **Continuing Bonds Theory** (7), which posits that maintaining symbolic or emotional connections with deceased loved ones—human or animal—helps preserve identity coherence and psychological equilibrium. When such bonds are severed, survivors may experience destabilization of coping strategies and diminished resilience (8, 9). From a disaster management standpoint, these insights suggest that psychosocial recovery programs should acknowledge the stabilizing role of companion animals in sustaining emotional continuity and adaptive functioning.

The third theme, **perceived social misunderstanding and isolation**, identifies a critical gap in post-disaster mental health care: the societal invisibility of pet-related grief. Participants frequently reported feelings of invalidation and trivialization by others, echoing previous studies that describe how cultural norms often minimize the emotional significance of human—animal attachments (10, 12). This lack of empathy may intensify trauma and delay recovery. This social disregard can intensify psychological trauma and delay emotional recovery. The concept of **disenfranchised grief**, originally proposed by Doka (13), aptly captures this phenomenon grief that is genuine and profound but denied social legitimacy. In disaster contexts, such disenfranchisement is amplified by humanitarian priorities focused exclusively on human survival, overlooking the interdependent emotional ecosystems linking humans and animals (14, 15).

Importantly, the findings highlight the potential value of **integrated veterinary**—**psychological interventions** within disaster response frameworks. The collaborative operations of veterinary relief and psychosocial support teams observed in Antakya provide a promising example of holistic humanitarian care. Existing interdisciplinary models—such as **One Health** and **Disaster Mental Health Integration**—advocate for close coordination between animal health and human mental health professionals to enhance community resilience (16, 17). Recognizing pet loss as a legitimate psychological stressor may promote more inclusive, compassionate, and sustainable recovery strategies.

From a sociocultural perspective, the results also reflect how **collectivist and religious norms** influence the expression and regulation of grief. In Turkish and broader Middle Eastern contexts, emotional restraint is culturally esteemed, and overt mourning—especially for animals may be stigmatized (18, 19). Such normative suppression can lead to internalized distress, further reinforcing isolation. Hence, culturally sensitive mental health interventions that respect religious and societal values while validating emotional experiences are essential for effective disaster psychosocial programming.

Finally, the implications of this study extend to **policy and practice**. Disaster preparedness plans should incorporate protocols for pet evacuation, registration, and reunification. Post-disaster mental health programs must include modules addressing animal-related grief and develop assessment tools sensitive to this form of loss. Additionally, training humanitarian workers and veterinarians to recognize and respond to disenfranchised grief could substantially strengthen psychosocial resilience and community recovery following disasters.

#### **Conclusion**

This phenomenological study demonstrated that the loss of companion animals during the 2023 Antakya earthquake produced profound psychological trauma, disruption of personal identity, and experiences of social disenfranchisement among survivors. These findings underscore that pet loss in disaster contexts is not a marginal or sentimental concern but a significant dimension of human suffering that warrants systematic inclusion within disaster mental health and recovery frameworks.

The participants' accounts revealed that the human—animal bond extends beyond species boundaries, functioning as a crucial source of emotional regulation, attachment, and resilience. The abrupt severance of this bond generates grief reactions comparable to human bereavement, which are further exacerbated by societal invalidation and the absence of institutional support.

Addressing this neglected aspect of post-disaster recovery requires the development of **integrated veterinary–psychological interventions**. Incorporating pet-related bereavement care into psychosocial support systems may mitigate long-term psychological consequences and promote a more compassionate, inclusive, and holistic approach to recovery. Furthermore, disaster preparedness policies should prioritize mechanisms for pet evacuation, identification, and reunification in alignment with **One Health** and **whole-of-society resilience** principles.

Future research should examine the longitudinal trajectories of grief, coping, and adaptation among bereaved pet owners across different cultural settings. Evaluating the effectiveness of interventions that combine animal welfare and human psychological support can provide an evidence base for policy integration. Ultimately, recognizing the interdependence of human and animal well-being is not merely an ethical obligation—it

constitutes an essential foundation for achieving sustainable resilience in the face of disasters.

# Acknowledgement

We sincerely thank all the individuals and families who participated in this study. The Chat-GPT version 5 Pro artificial intelligence tools were used for language and editorial refinement of the manuscript.

## **Conflict of Interest Statement**

The authors affirm that they have no commercial, financial, or personal relationships that could be interpreted as potential conflicts of interest related to the research, authorship, or publication of this article.

#### References

- 1. Cordaro M. Pet loss and disenfranchised grief: Implications for mental health counseling practice. Journal of Mental Health Counseling. 2012;34(4):283–94.
- 2.Adams J. Pet death as disenfranchised loss: examining posttraumatic growth and attachment in college students: Colorado State University; 2021.
- 3. Chapaux V, Mégret F, Natarajan U. The Routledge handbook of international law and anthropocentrism: Routledge; 2023.
- 4.Reese LA. Fostering and the Human-Animal Bond: A Guide for Companion Animal Foster Care Providers and Shelters: Academic Press; 2025.
- 5. Kajiwara H. Surviving with companion animals in Japan: Life after a Tsunami and Nuclear Disaster: Springer Nature; 2020.
- 6.O'Haire ME, Tedeschi P, Jenkins M, Braden SR, Rodriguez KE. The impact of human-animal interaction in trauma recovery. New Direct Hum Anim Bond. 2019;15:15–53.
- 7.Klass D, Silverman PR, Nickman S. Continuing bonds: New understandings of grief: Taylor & Francis; 2014.
- 8.Borden LJN, Adams CL, Bonnett BN, Shaw JR, Ribble CS. Use of the measure of patient-centered communication to analyze euthanasia discussions in companion animal practice. Journal of the American Veterinary Medical Association. 2010;237(11):1275–87.
- 9.Chur-Hansen A. Grief and bereavement issues and the loss of a companion animal: People living with a companion animal, owners of livestock, and animal support workers. Clinical Psychologist. 2010;14(1):14–21.
- 10.Kogan L, Erdman P. Pet Loss, Grief, and Therapeutic Interventions: Routledge; 2020.
- 11.Czycholl jk. Complexity and continuity in the human-animal bond—a thematic and storied exploration of companion animal bereavement: faculty of health and applied sciences, university of the west of england ...; 2024.
- 12.Irvine L. Animals in disasters: Issues for animal liberation activism and policy. 2006.
- 13.Doka KJ. Disenfranchised grief. Bereavement care. 1999;18(3):37–9.
- 14.Heath SE, Linnabary RD. Challenges of managing animals in disasters in the US. Animals. 2015;5(2):173–92.
- 15.Morrow R, Rodriguez A, King N. Colaizzi's descriptive phenomenological method. The psychologist. 2015;28(8):643–4.
- 16.Prasad MNV. Iodine essentiality for human health: sources, toxicity, biogeochemistry, and strategies for alleviation of iodine deficiency disorders. Medical Geology: En route to One Health. 2023:155–74.
- 17.Organization WH. WHO benchmarks for strengthening health emergency capacities: World Health Organization; 2024.
- 18.Karanci NA, Acarturk. Post-traumatic growth among Marmara earthquake survivors involved in disaster preparedness as volunteers. Traumatology. 2005;11(4):307–23.
- 19.Masarwi M. Part Three: Coping with Bereavement in the Religious, Cultural and Societal Contexts—How Religion and Culture Shape Bereavement. The Bereavement of

Martyred Palestinian Children: Gendered, Religious and National Perspectives: Springer;

erspecti.

Recepted Manuscript Uncorrected brook herceted Manuscript Uncorrected brook herceted Manuscript Uncorrected brook herceted Manuscript Uncorrected brook herceted brook herceted