TURKISH PSYCHOLOGICAL COUNSELING AND GUIDANCE JOURNAL
2025, VOL. 15, NO. 78, 573-583

Official Journal of
Turkish Psychological Counseling
and Guidance Association

ISSN: 1302 – 1370, E-ISSN: 2822 – 6569

https://doi.org/ 10.17066/tpdrd.1533628

RESEARCH ARTICLE

Fear of Earthquake and Psychological Distress: The Multiple Mediating Roles of Intolerance of Uncertainty and Doomscrolling

Bilal Kaya[a] Ayse Sarpkaya[a] Fulya Cenkseven Önder[b]

[a]Milli Eğitim Bakanlığı, Türkiye. [b] Çukurova University, Adana, Türkiye.

ARTICLE HISTORY

Received: 19/08/2024
Accepted: 30/12/2024

KEYWORDS

Fear of Earthquake,
Psychological Distress,
İntolerance of Uncertainty,
Doomscrolling.

ABSTRACT

The fear of an earthquake is associated with psychological distress. However, little is known about how the fear of an earthquake can lead to psychological distress. This study set out to explore the multiple mediating roles of intolerance of uncertainty and doomscrolling between fear of earthquake and psychological distress. In this study, 415 participants were involved. Structural equation modeling was performed to analyze multiple mediating roles of intolerance of uncertainty and doomscrolling. The multiple mediating roles of intolerance of uncertainty and doomscrolling were statistically confirmed. This study revealed that the fear of an earthquake increased psychological distress, the indirect roles of intolerance of uncertainty and doomscrolling. These findings contribute to the clarification of the association between fear of an earthquake and psychological distress and the underlying mechanisms of this relationship. Nevertheless, further research is required to elucidate better the relationship between fear of an earthquake, intolerance of uncertainty, doomscrolling, and psychological distress. Recommendations are provided for practitioners and researchers.

On February 6, 2023, a devastating and 7.6 and 7.7 magnitude earthquake centered in Kahramanmaraş hit Türkiye and Syria, with 11,020 aftershocks recorded in one month. According to the Türkiye Disaster and Management Authority (AFAD), 13 million people were affected and 45,089 people died in this disaster that hit 11 provinces in Türkiye (AFAD, 2023). Thousands of citizens lost loved ones, homes, and cities in this devastating earthquake. Earthquakes have dramatic consequences for mental health due to their negative impact on psychological wellbeing (Prayag et al., 2021), quality of life (Wang et al., 2000), subjective wellbeing (Uchida et al., 2014), and life satisfaction (Şeker, 2016). Furthermore, the earthquake experience decreases positive emotions and increases negative emotions (Prayag et al., 2021). The feeling of fear is one of the most prominent among these. Kowalski and Kalayjian (2001) highlighted that an earthquake increased the level of fear. In a longitudinal study, Ceyhan and Ceyhan (2007) reported that fear was the most felt emotion after the earthquake in terms of both duration and frequency. The feeling of fear is triggered by factors such as the unpredictability of the duration and magnitude of the earthquake, the continuation of aftershocks, material and moral losses, the risk of collapse, and earlier earthquake experiences (Prizmić-Larsen et al., 2023).

The American Psychological Association (APA) describes fear as an intense and basic feeling that emerges from the threat perception and leads to physical changes (APA, 2023). This emotion felt toward an earthquake is referred to as the fear of earthquake (FoE) (Santos-Reyes, 2020). The FoE may deteriorate mental health. The FoE was inversely associated with life satisfaction and positive affect (Prizmić-Larsen et al., 2023).

CORRESPONDING AUTHOR Bilal Kaya, bilal00790@gmail.com, ORCID: 0000-0002-6246-3540, Milli Eğitim Bakanlığı, Türkiye.

This is an article under the terms of the Creative Commons Attribution License. As the original work is properly cited, reproduction in any medium is permitted.

© **2025 The Authors**. Turkish Journal of Counseling Psychology and Guidance is published by Turkish Psychological Counselling and Guidance Association

Another study emphasized an association between post-earthquake fear and depression (Zhou et al., 2016). It was also reported that the FoE increased anxiety (Tikvica-Luetić et al., 2022). Earlier studies have reported a positive link between earthquake-related fear and stress (Başoğlu et al., 2004; Guerra et al., 2014; Xu & Song, 2011). A longitudinal study also reported that earthquake-related fear caused psychological distress (Livanou et al., 2005). Psychological stress is defined as a state of emotional sadness including depression, anxiety and stress (Henry & Crawford, 2005)

Although the FoE is known to lead to psychological distress, the role of intolerance of uncertainty and the role of news followed on social media remain unclear. This study aims to reveal the role of intolerance of uncertainty and doomscrolling in the relationship between the FoE and psychological distress. Thus, it is believed to contribute to the understanding of the mechanism of the association between FoE and psychological distress.

Intolerance of Uncertainty and Doomscrolling as the Mediators

Intolerance of uncertainty (IU) is identified as having difficulty tolerating unfamiliarity and unpredictability (Carleton, 2016). A burgeoning body of evidence suggests that IU has negative impacts on mental health, such as hopelessness (Demirtas & Yildiz, 2019), depression and anxiety (McEvoy & Mahoney, 2012), and psychological distress (Beck & Daniels, 2023). Unforeseen life events are a significant antecedent of IU (Carleton, 2016). An earthquake is an unpredictable and destructive life event. Therefore, IU may have an indirect role in the negative consequences of the FoE on mental health. In addition, according to the cognitive-behavioral model of IU, unfamiliar and unpredictable life events trigger IU, and IU leads to psychological distress (Hebert & Dugas, 2019). This model may suggest the mediating role of IU in the association between the FoE and psychological distress.

To our knowledge, no studies in the literature have addressed the mediating role of IU in the association between the FoE and psychological distress. On the other hand, some studies have indicated the indirect role of IU between the fear of life events and psychological distress. Accordingly, the moderating role of IU was found between the fear of exposure to natural disasters and psychological distress (Pardue, 2018). Existing studies reported the mediating role of IU in the association between the fear of COVID-19 and psychological distress (Gullo et al., 2022; He et al., 2021). Therefore, IU may have an indirect role in the association between the FoE and psychological distress.

The new concept of doomscrolling is referred to as the compulsive following of gloomy and depressing news on social media (Sharma et al., 2022). Feelings of anxiety and fear caused by challenging life events (i.e., COVID-19 and natural disasters) intensify the feeding of sad news on social media (Ytre-Arne & Moe, 2021). Challenging life events increase uncertainty, and individuals obsessively read sad news on social media to compensate for the feelings of uncertainty, control, and information gaps. Doomscrolling as reassurance-seeking exacerbates mental health (Anand et al., 2022). In this respect, doomscrolling is positively linked to negative feelings (Buchanan et al., 2021) and inversely related to life satisfaction and psychological well-being (Shabahang et al., 2022) and optimism (Buchanan et al., 2021). In addition, Satici et al. (2022) found that doomscrolling is negatively related to psychological well-being. Moreover, existing studies have reported that doomscrolling increases psychological distress (Anand et al., 2022; Satici et al., 2022; Sharma et al., 2022).

According to the doomscrolling model, anxiety and fear based on challenging life events lead to doomscrolling, and doomscrolling negatively affects well-being (Sharma et al., 2022). This model may highlight that the FoE increases doomscrolling and doomscrolling enhances psychological distress. Therefore, doomscrolling may have an indirect influence on the association between the FoE and psychological distress. Several studies have emphasized that fear about climate change and COVID-19 has led to doomscrolling (Apprich, 2022; Strasser et al., 2022) and doomscrolling causes psychological distress (Anand et al., 2022; Satici et al., 2022). Similarly, the FoE may augment doomscrolling, and doomscrolling may negatively influence mental health. Hence, doomscrolling may play a mediating role in the relationship between FoE and psychological distress.

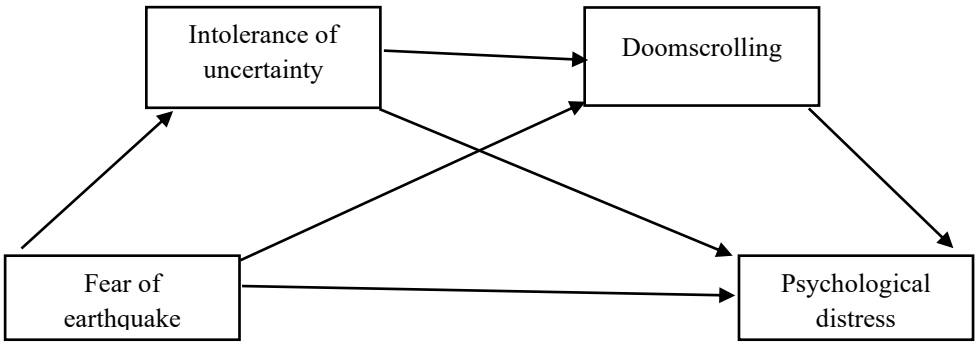
According to the transdiagnostic model of IU, adverse life events that evoke feelings of fear and anxiety increase IU; individuals display reassurance-seeking, safety, and compulsive behaviors to diminish uncertainty; and these behaviors have negative consequences on mental health (Einstein, 2014). This model

may propose that the FoE can lead to psychological distress through IU and doomscrolling. Previous studies have reported that disaster-related fear increases IU (He et al., 2021; Pardue, 2018) and doomscrolling (Apprich, 2022; Strasser et al., 2022). IU was also reported to be positively linked to psychological distress (Hebert & Dugas, 2019; McEvoy & Mahoney, 2012), and doomscrolling was reported to be positively related to psychological distress (Satici et al., 2022; Sharma et al., 2022). Therefore, IU and doomscrolling may play multiple mediating roles in the association between the FoE and psychological distress.

The Present Study

This study addressed the multiple mediating roles of IU and doomscrolling in the link between the FoE and psychological distress. Investigating the multiple mediating effects of IU and doomscrolling may contribute to the understanding of the relationship mechanism between the FoE and psychological distress and improvement of intervention programs to reduce the FoE, IU, and doomscrolling by better elucidating the mechanism of the relationship. Considering the significance of the present study, the model is presented (see Figure 1) and four hypotheses are suggested. These hypotheses are as follows: (i) the FoE is positively related to psychological distress (H1), (ii) IU mediates the relationship between the FoE and psychological distress (H2), (iii) doomscrolling mediates the relationship between the FoE and psychological distress (H3), and (iv) IU and doomscrolling mediate the relationship between the FoE and psychological distress (H4).

Figure 1. Hypothetical model



Methods

Participants and Procedures

According to G*Power (Faul et al., 2007), a study with three predictor variables requires at least 348 participants to display an effect size between the small and medium levels (1-β= 0.95, α = 0.05, f2=0.05). The final sample consisted of 415 participants. Of these, 313 were female (75.4%) and 102 were male (24.6%) with an age range of from 18 to 66 years (Mage= 34.98, SD=10.79). Data were gathered from the participants living in 43 provinces in Türkiye, including 11 provinces affected by the earthquake that struck on February 6, 2023. Data collected between May 2023 and June 2023. Table 1 presents the participants' detailed characteristics. Participants were recruited utilising convenience sampling methods and collected from 43 out of 81 provinces in Türkiye through a web-assisted survey. The survey link was shared on social media platforms (Facebook, WhatsApp and Instagram). The participants were provided with no incentives. All the questions had to be completed before the online questionnaire could be submitted. Hence, there were no missing data. Informed consent was received from all participants, and all procedures were organised in accordance with the Declaration of Helsinki. The study was also approved by the ethics committee of the university where the third author was employed.

Table 1. Sample characteristics

Variable	Frequency	%
Gender		
Female	313	75.4
Male	102	24.6
Marital status		
Single	181	43.6
Married	234	56.4
Occupational status		
Student	102	24.6
Employee	228	54.9
Unemployed	75	18.1
Retired	10	2.4
Perceived social-economic status		
Low	83	20
Moderate	323	77.8
High	9	2.2
Province of residence		
Earthquake struck 11 provinces	352	84.8
Other provinces	63	15.2
Relocation after the earthquake	261	62.9
Yes	154	37.1
No		
Have you had any relatives who lost their lives due to an earthquake?		
Yes	216	52
No	199	48
Did you have any material losses due to the earthquake?		
Yes	189	45.5
No	226	54.5

Measures

Fear of Earthquake Scale (FES)

In the present study, the Fear of Earthquake Scale (FES) was adapted from the Fear of COVID-19 Scale developed by Ahorsu et al. (2022). The unidimensional scale comprises seven items (e.g., "I am most afraid of COVID-19") rated on a 5-point Likert scale, with 1 indicating "strongly disagree" and 5 indicating "strongly agree". The Fear of COVID-19 Scale was modified by adhering to the Likert type, number of items and unidimensional structure. (e.g., I'm very afraid of earthquakes). In confirmatory factor analysis (CFA), model fit values were accepted ($\chi 2/df = 1.66$, AGFI = 0.95, TLI = 0.99 GFI = 0.98, CFI = 0.99, SRMR = 0.07 and RMSEA = 0.03). CFA factor loadings were found between 0.58 and 0.77. Besides, the AVE value was 0.59 and the CR value was 0.91, so convergent and discriminant validity were obtained. Reliability coefficient values of Cronbach's alpha (α) 0.88, McDonald's omega (ω) 0.88, and Guttmann's lambda (λ6) 0.89 were highly acceptable.

Doomscrolling Scale (DS)

The scale was developed by Tylka & Iannantuono (2016) to measure how women conceptualize the concept The Doomscrolling Scale was developed by Sharma et al. (2022) and adapted into Turkish by Satici et al. (2022). The scale has a 4-item short form and a 15-item long form. This study utilized the 4-item short form, which is unidimensional and includes no reverse items (e.g., I feel the urge to search for bad news on social media more and more often). The DS is responded on a 7-point Likert scale (1=strongly disagree, 7=strongly agree), with higher scores indicating greater DS. Factor loadings ranged from 0.63 to 0.84. The short form of the scale had acceptable fit indices: $\chi2$=28.78, NFI=0.94, CFI=0.95, SRMR=0.04, IFI=0.95. In the current study, model fit values are in the acceptance range ($\chi2$/df = 3.93, TLI = 0.98, GFI = 0.96, CFI = 0.99, SRMR = 0.07 and RMSEA = 0.08).

Intolerance of Uncertainty Scale (IUS-12)

The DASS-21 was developed by Henry and Crawford (2005) and adapted to Turkish by Yilmaz et al. (2017). The scale has 21 items and three dimensions of anxiety, depression, and stress (e.g., I had difficulty relaxing). The factor loadings of the scale, which does not include items coded reversely, range between 0.41 and 0.81, with higher scores implying more psychological distress. The DASS-21 is based on a 4-point Likert scale (0=not at all suitable for me, 3=completely suitable for me). The scale has acceptable fit indices: AGFI=0.98, GFI=0.98, RMR=0.02, NFI=0.979. In the current study, model fit values are in the acceptance range ($\chi2$/df = 3.01, TLI = 0.93, GFI = 0.92, CFI = 0.94, SRMR = 0.06 and RMSEA = 0.07).

Statistical Analysis

Initially, multivariate statistical assumptions were tested. Then the Structural Equation Modeling (SEM) was carried out in two steps as recommended by Anderson and Gerbing (1988). While the first one tests the measurement model, the second one tests the structural model. The model fit values were determined according to the criteria indicated by Hu and Bentler (1999). Hence, model fit 3> $\chi2$/df < 5, TLI > 0.90, RMSA < 0.08, GFI > 0.90, AGFI > 0.90, CFI > 0.90 and SRMR < 0.08 were within acceptable values. Gender and age were included as control variables in the analysis. The analyses were conducted using SPSS 25, AMOS 26, and JASP 0.16.

Results

Correlations and Descriptive Statistics

The variables were positively correlated with each other. Table 2 presents the mean, reliability, kurtosis, and skewness values.

Table 2. Descriptive statistics and correlations

Variables	Mean (SD)	*a*	*ω*	Skewness	Kurtosis	1	2	3
1. Fear of an Earthquake	24.28 (7.21)	0.89	0.90	-0.35	-0.68			
3. Intolerance of Uncertainty	41.01 (10.28)	0.91	0.91	-0.31	-0.31	0.45**		
3. Doomscrolling	10.38 (6.73)	0.90	0.90	0.25	0.08	0.37**	0.32**	
4. Psychological distress	27.38 (16.55)	0.92	0.95	0.21	-0.84	0.55**	0.57**	0.50**

**p <0.01

Statistical Assumption Tests

The skewness value was between -0.35 and 0.25, and the kurtosis value was between -0.84 and 0.08. According to Tabachnick and Fidell (2001), these values meet the criterion of +1.5 and -1.5 for normal distribution. VIF should be below 10, tolerance should be above 0.10, and Durbin-Watson should be between 1 and 3 to avoid multiple linearity problems and correlation between residuals (Field, 2016). VIF was between 1.19 and 1.35, tolerance between 0.74 and 0.84, and Durbin-Watson 1.99. In addition, the reliability coefficients of the variables above 0.70 are an indication of internal consistency. After the assumptions were met, SEM analysis was performed.

Measurement Model

In this study, the measurement model consisted of four latent variables (the FoE; items FE1-FE7; doomscrolling, items DM1-DM4; IU; prospective and inhibitory anxiety dimensions, psychological distress, depression, anxiety, and stress dimensions). The model fit values of the measurement model were accepted ($\chi 2/df = 2.32$; CFI = 0.97; GFI = 0.94; TLI = 0.96; RMSA = 0.06; SRMR = 0.04). The standardized factor loadings ranged from 0.66 to 0.88.

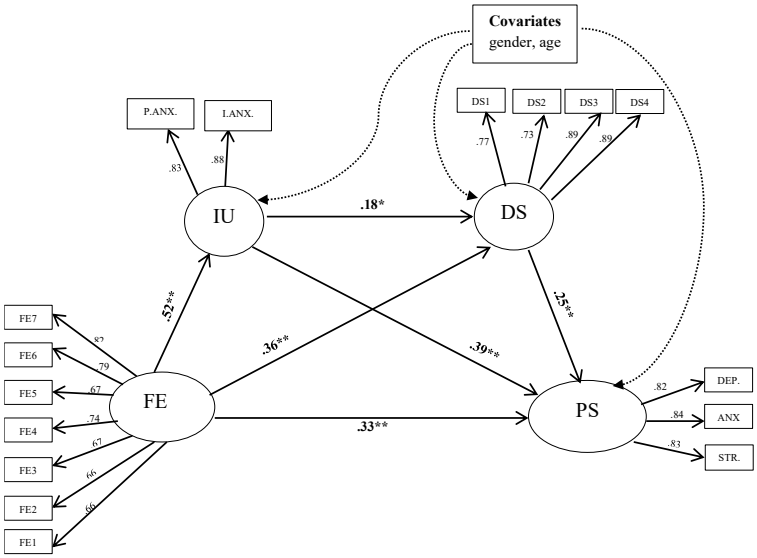
Structural Model

Gender and age are controlled, and standardized direct effects are presented in the structural model (see Figure 2). Total and direct effect of the FoE on psychological distress was significant, $\beta = 0.64$, $p<0.01$ for total effect; $\beta = 0.33$, $p<0.01$ for direct effect. Moreover, the indirect effect of IU ($\beta = 0.20$, 95% CI = [0.13, 0.29]) and doomscrolling ($\beta = 0.09$, 95% CI = [0.05, 0.14]) between the FoE and psychological distress was significant. Finally, the serial indirect effect of IU and doomscrolling between the FoE and psychological distress was significant ($\beta = 0.02$, 95% CI = [0.01, 0.05]) (see Table 3). Model fit values of the structural model were accepted ($\chi 2/df = 2.13$; CFI = 0.96; GFI=0.95, TLI=0.94; RMSA=0.05; SRMR=0.06).

Table 3. Total, direct and indirect effects of fear of earthquake and psychological distress

		95% CI	
Path	Coefficient	LL	UL
Total effect	0.64	0.54	0.72
Direct effect	0.33	0.28	0.45
Fear of Earthquake➔ Intolerance of Uncertainty➔ Psychological distress	0.20	0.13	0.29
Fear of Earthquake➔Doomscrolling➔ Psychological distress	0.09	0.05	0.14
Fear of Earthquake➔ Intolerance of Uncertainty➔Doomscrolling ➔ Psychological distress	0.02	0.01	0.05

Figure 2. Structural modeling for the multiple mediation model



Note. *p < 0.05, **p <0.01, Values Shown are Standardized Direct Effects, FE: Fear of Earthquake, IU: Intolerance of Uncertainty, P.ANX.: Prospective Anxiety, I.ANX: Inhibitory Anxiety, DS: Doomscroling, PS: Psychological Distress; DEP: Depression, STR: Stress

Discussion

The earthquake in Türkiye and Syria had devastating outcomes. Short-term and long-term effects of the FoE worsen mental health. The current study tested the multiple mediating roles of IU and doomscrolling in the

association between the FoE and psychological distress. All the hypotheses (H1 to H4) were supported. The first hypothesis was that the FoE was positively associated with psychological distress. Consistent with the findings of the present study, previous studies have shown a positive association between earthquake-related fear and psychological distress (Guerra et al., 2014; Livanou et al., 2005; Prizmić-Larsen et al., 2023). Factors, such as thinking that the earthquake, would happen again or losing one's life and the lives of loved ones, material losses, sleeplessness, and alertness may lead to psychological distress.

The hypothesis indicating the mediating role of IU in the association between the FoE and psychological distress was confirmed. This result is congruent with the cognitive-behavioral model of IU. According to this model, unpredictable adverse life events increase IU, and IU has an inverse influence on mental health (Hebert & Dugas, 2019). The unpredictability of earthquakes and the fear of losing one's own life and the lives of loved ones may increase IU and trigger psychological distress. Similarly, the role of IU was detected in the link between the fear of exposure to natural disasters and psychological distress (Pardue, 2018). Therefore, the unpredictability of an earthquake creates uncertainty. Intolerance to this uncertainty intensifies psychological distress. In other words, IU has an indirect effect on the relationship between the FoE and psychological distress.

Another finding of this study was that doomscrolling mediated between the FoE and psychological distress. This finding is concordant with the doomscrolling model. According to this model, distressing news is compulsively followed on social media as a way to compensate for feelings of anxiety and fear based on adverse life events, and this obsessive scrolling negatively influences wellbeing (Anand et al., 2022; Sharma et al., 2022). Individuals compulsively follow distressing news on social media to gain reassurance-seeking and control to alleviate the sense of fear caused by the earthquake, and obsessive scrolling of this depressive news can lead to psychological distress. In other words, the FoE aggravated psychological distress via doomscrolling.

The most crucial contribution of the present study was demonstrating the multiple mediating roles of IU and doomscrolling between the FoE and psychological distress. An earthquake arouses a sense of fear (Kowalski & Kalayjian, 2001). Fear associated with adverse life events increases IU (Apprich, 2022). Sad and depressing news is compulsively scrolled on social media to reduce the uncertainty caused by this fear (Anand et al., 2022). This process has an inverse impact on mental health. Compatible with the findings of this study, the transdiagnostic model of IU highlighted that the sense of fear and anxiety of upsetting life events increases IU, and individuals with increased IU display reassurance-seeking and compulsive behaviors, which negatively affects mood (Einstein, 2014). Therefore, the FoE may cause psychological distress through IU and obsessive scrolling of distressing news. In other words, IU and doomscrolling play multiple mediating roles in the relationship between the FoE and psychological distress.

Limitations and Future Directions

This study has several limitations and recommendations. Firstly, the cross-sectional design of this study does not enable any longitudinal or causal relationships. Further studies could employ a cross-lagged panel design to investigate the mediating effects of IU and doomscrolling in the relationship between the FoE and psychological distress. In addition, the causal impact of the FoE on IU, doomscrolling, and psychological distress can be tested through experimental studies. Secondly, the self-report scales used in the present study may lead to some response biases. To reduce this limitation, mixed-method design could be employed to address the association between the FoE, IU, doomscrolling, and psychological distress. Thirdly, this study investigated the multiple mediating roles of IU and doomscrolling. Alternative mediators may exist in the relationship between the FoE and psychological distress. Thus, further studies could explore the multiple mediating roles of emotion regulation, self-criticism, and anger rumination. Fourth, considering the results of this study, intervention programs can be developed to alleviate psychological distress based on the FoE. These intervention programs could include sessions targetting IU and doomscrolling.

Conclusion

In conclusion, the present study provides valuable insights into how the FoE affects psychological distress through IU and doomscrolling. The findings show that the FoE has both direct and indirect effects on psychological distress, with the indirect effect being mediated by IU and doomscrolling. Finally, this study contributed to understanding the relationship mechanism between the FoE and psychological distress by revealing the roles of IU and doomscrolling.

Author Contributions. All author(s) contributed to the study conception and design. Material preparation, data collection and analysis was performed by [Bilal KAYA, Ayşe SARPKAYA , Fulya CENKSEVEN ÖNDER], The first draft of the manuscript was written by [Bilal KAYA, Ayşe SARPKAYA], All author(s) commented on previous versions of the manuscript. All author(s) read and approved the final manuscript.

Funding Disclosure. This research did not receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Conflicts of Interest. The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Data Availability. Data will be available on request.

Ethics Approval and Consent to Participate. All procedures performed in the study involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. Ethics committee approval was obtained from the scientifc research and publication ethics committee of Cukurova University in the feld of social sciences and humanities (No: E-74009925-064.01.02-703206).

References

AFAD. (2023, March 1). Kahramanmaras¸'ta meydana gelen depremler hk. basın bulteni-36. https://www.afad.gov.tr/kahramanmarasta-meydana-gelen-depremler-hk-36.

Ahorsu, D. K., Lin, C. Y., Imani, V., Saffari, M., Griffiths, M. D., & Pakpour, A. H. (2022). The Fear of COVID-19 Scale: Development and initial validation. *International journal of Mental Health and Addiction, 20*(3), 1537–1545. https://doi.org/10.1007/s11469-020-00270-8

American Psychological Association (APA). Fear. In APA dictionary of psychology. Retrieved August 8, 2023, from https://dictionary.apa.org/fear

Anand, N., Sharma, M. K., Thakur, P. C., Mondal, I., Sahu, M., Singh, P., & Singh, R.(2022). Doomsurfing and doomscrolling mediate psychological distress in COVID-19 lock down: Implications for awareness of cognitive biases. *Perspectives in Psychiatric Care*, *58*(1), 170-172. https://doi.org/10.1111/ppc.12803

Anderson, J. C., & Gerbing, D. W. (1988). Structural equation modeling in practice: A review and recommended two-step approach. *Psychological Bulletin*, *103*(3), 411. https://doi.org/10.1037/0033-2909.103.3.411

Apprich, N. F. A. (2022*). Scrolling through the climate crisis: Exploring the ımpact of climate change related doomscrolling on helplessness and depression* (Bachelor's thesis, University of Twente). https://essay.utwente.nl/95569

Başoğlu, M., Kiliç, C., Şalcioğlu, E., & Livanou, M. (2004). Prevalence of posttraumatic stress disorder and comorbid depression in earthquake survivors in Turkey: an epidemiological study. *Journal of Traumatic Stress: Official Publication of The International Society for Traumatic Stress Studies*, *17*(2), 133-141. https://doi.org/10.1023/B:JOTS.0000022619.31615.e8.

Beck, E., & Daniels, J. (2023). Intolerance of uncertainty, fear of contamination and perceived social support as predictors of psychological distress in NHS healthcare workersduring the COVID-19 pandemic. *Psychology, Health & Medicine*, *28*(2), 447-459. https://doi.org/10.1080/13548506.2022.2092762.

Buchanan, K., Aknin, L. B., Lotun, S., & Sandstrom, G. M. (2021). Brief exposure to social media during the COVID-19 pandemic: Doom-scrolling has negative emotionalconsequences, but kindness-scrolling does not. *PloS One*, *16*(10), e0257728.https://doi.org/10.1371/journal.pone.0257728

Carleton, R. N. (2016). Into the unknown: A review and synthesis of contemporary modelsinvolving uncertainty. *Journal of Anxiety Disorders*, *39*, 30–43. https://doi.org/10.1016/j.janxdis.2016.02.007

Carleton, R. N., Sharpe, D. & Asmundson, G.J. (2007). Anxiety sensivity and intolerance of uncertainty: Requisites of the fundamental fears? *Behaviour Research and Therapy*, *45*(10), 2307-2316. https://doi.org/10.1016/j.brat.2007.04.006.

Ceyhan, E., & Ceyhan, A. A. (2007). Earthquake quality of life and academic achievement six years after the earthquakes in Marmara, Turkey. *Disasters*, *31*(4), 516-529. https://doi.org/10.1111/j.1467-7717.2007.01023.x

Demirtas, A. S., & Yildiz, B. (2019). Hopelessness and perceived stress: The mediating role of cognitive flexibility and intolerance of uncertainty. *Dusunen Adam The Journal of Psychiatry and Neurological Sciences*, *32*(3), 259. https://doi.org/10.14744/dajpns.2019.00035

Einstein, D. A. (2014). Extension of the transdiagnostic model to focus on ıntolerance of uncertainty: A review of the literature and ımplications for treatment. *Clinical Psychology*, *21*(3), 280–300. https://doi.org/10.1111/cpsp.12077

Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, *39*(2), 175–191. https://doi.org/10.3758/bf03193146

Field, A. (2016). *Discovering statistics using IBM SPSS Statistics*. London: Sage.

Guerra, C., Cumsille, P., & Martínez, M. L. (2014). Post-traumatic stress symptoms inadolescents exposed to an earthquake: Association with self-efficacy, perceived magnitude,and fear. *International Journal of Clinical and Health Psychology*, *14*(3), 202-207. https://doi.org/10.1016/j.ijchp.2014.05.001

Gullo, S., Gelo, O. C. G., Bassi, G., Lo Coco, G., Lagetto, G., Esposito, G., ... & Di Blasi, M. (2022). The role of emotion regulation and intolerance to uncertainty on the relationship between fear of COVID-19 and distress. *Current Psychology*, 1-12. https://doi.org/ 10.1007/s12144-022-03071-5.

He, X., Zhang, Y., Chen, M., Zhang, J., Zou, W., & Luo, Y. (2021). Media exposure to COVID-19 predicted acute stress: a moderated mediation model of intolerance of uncertainty and perceived social support. *Frontiers in Psychiatry*, 11, 613368. https://doi.org/10.3389/fpsyt.2020.613368

Hebert, E. A., & Dugas, M. J. (2019). Behavioral experiments for intolerance of uncertainty: Challenging the unknown in the treatment of generalized anxiety disorder. *Cognitive and Behavioral Practice*, *26*(2), 421-436. https://doi.org/10.1016/j.cbpra.2018.07.007

Henry, J. D., & Crawford, J. R. (2005). The short- form version of the depression anxiety stress scales (DASS-21): Construct validity and normative data in a large non- clinical sample. *British Journal of Clinical Psychology*, *44*(2), 227–239. https://doi.org/10.1348/014466505X29657

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal, 6*(1), 1-55. https://doi.org/10.1080/10705519909540118

Kowalski, K. M., & Kalayjian, A. (2001). Responding to mass emotional trauma: A mental health outreach program for Turkey earthquake victims. *Safety Science*, *39*, 71-81. https://doi.org/10.1016/S0925-7535(01)00027-3

Livanou, M., Kasvikis, Y., Başoğlu, M., Mytskidou, P., Sotiropoulou, V., Spanea, E., ... & Voutsa, N. (2005). Earthquake-related psychological distress and associated factors 4 yearsafter the Parnitha earthquake in Greece. *European Psychiatry*, *20*(2), 137-144. https://doi.org/10.1016/j.eurpsy.2004.06.025.

McEvoy, P. M., & Mahoney, A. E. (2012). To be sure, to be sure: Intolerance of uncertainty mediates symptoms of various anxiety disorders and depression. *Behavior Therapy*, *43*(3),533-545. https://doi.org/10.1016/j.beth.2011.02.007

Pardue, S. E.(2018). E*ffects of natural disaster exposure on emotional functioning moderated by coping, ıntolerance of uncertainty, and emotional reactivity*. Southeastern Louisiana University; Hammond, LA, USA. 10792151.

Prayag, G., Ozanne, L. K., & Spector, S. (2021). A psychological wellbeing perspective oflong-term disaster recovery following the Canterbury earthquakes. *International Journal of Disaster Risk Reduction*, *63*, 102438. https://doi.org/10.1016/j.ijdrr.2021.102438

Prizmić-Larsen, Z., Vujčić, M. T., & Lipovčan, L. K. (2023). Fear of COVID-19 and fear of earthquake: Multiple Distressing Events and Well-Being in Croatia. *Psychological Reports*, 00332941231156813. https://doi.org/10.1177/00332941231156813

Santos-Reyes, J. (2020). Multi-hazard awareness, risk perception and fear to earthquakes: the case of high-school students in Mexico city. *Journal of Risk Analysis and Crisis Response*, *10*(3), 91-96. https://doi.org/10.2991/jracr.k.200923.001

Sarıçam, H., Erguvan, F. M., Akın, A., & Akça, M. Ş. (2014). The Turkish short version of the intolerance of uncertainty (IUS-12) scale: The study of validity and reliability. *Route Educational and Social Science Journal*, *1*(3), 148-157. https://doi.org/10.17121/ressjournal.109

Satici, S. A., Gocet Tekin, E., Deniz, M. E., & Satici, B. (2022). Doomscrolling Scale: Itsassociation with personality traits, psychological distress, social media use, and wellbeing. *Applied Research in Quality of Life*, *18*, 833–847. https://doi.org/10.1007/s11482-022-10110-7.

Shabahang, R., Kim, S., Hosseinkhanzadeh, A. A., Aruguete, M. S., & Kakabaraee, K. (2022). “Give your thumb a break” from surfing tragic posts: potential corrosive consequences of social media users’ doomscrolling. *Media Psychology, 26*(4), 460-479. https://doi.org/10.1080/15213269.2022.2157287

Sharma, B., Lee, S. S., & Johnson, B. K. (2022). The dark at the end of the tunnel: Doomscrolling on social media newsfeeds. *Technology, Mind, and Behavior, 3*(1). https://doi.org/10.1037/tmb0000059

Strasser, M. A., Sumner, P. J., & Meyer, D. (2022). COVID-19 news consumption anddistress in young people: A systematic review. *Journal of Affective Disorders*, *300*, 481–491. https://doi.org/10.1016/j.jad.2022.01.007

Şeker, B. D. (2016). Evaluation of life satisfaction after the 2011 Van (Turkey) earthquake.*Social Behavior and Personality: an International Journal*, *44*(9), 1409-1417. https://doi.org/10.2224/sbp.2016.44.9.1409

Tabachnick, B. G., & Fidell, L. S. (2001). *Using multivariate statistics (4th ed.)*. Allyn & Bacon, Inc.

Tikvica-Luetić, A., Habek, D., Špoljar, P., Miletić, I. A., & Šklebar, I. (2022). Mothers'anxiety to aggravated acute fear of earthquakes in the city of Zagreb in the COVID-19 pandemic. *Psychiatria Danubina*, *34*(2), 370-373. https://doi.org/10.24869/psyd.2022.370.

Uchida, Y., Takahashi, Y., & Kawahara, K. (2014). Changes in hedonic and eudaimonic well-being after a severe nationwide disaster: The case of the Great East Japan Earthquake. *Journalof Happiness Studies*, 15, 207-221. https://doi.org/10.1007/s10902-013-9463-6

Wang, X., Gao, L., Zhang, H., Zhao, C., Shen, Y., & Shinfuku, N. (2000). Post-earthquakequality of life and psychological well-being: Longitudinal evaluation in a rural communitysample in northern China. *Psychiatry and Clinical Neurosciences*, *54*(4), 427-433. https://doi.org/10.1046/j.1440-1819.2000.00732.x.

Xu, J., & Song, X. (2011). A cross-sectional study among survivors of the 2008 Sichuanearthquake: Prevalence and risk factors of posttraumatic stress disorder. *General Hospital Psychiatry*, *33*(4), 386-392. https://doi.org/10.1016/j.genhosppsych.2011.05.004.

Yilmaz, O., Boz, H., & Arslan, A. (2017). The validity and reliability of depression stress and anxiety scale (DASS 21) Turkish short form. *Research of Financial Economic and Social Studies, 2*(2), 78–91. https://dergipark.org.tr/tr/pub/fesa/issue/30912/323190

Ytre-Arne, B., & Moe, H. (2021). Doomscrolling, monitoring and avoiding: News use inCOVID-19 pandemic lockdown. *Journalism Studies*, *22*(13), 1739-1755. https://doi.org/10.1080/1461670X.2021.1952475

Zhou, X., Wu, X., & An, Y. (2016). Understanding the relationship between trauma exposureand depression among adolescents after earthquake: the roles of fear and resilience. *Frontiersin Psychology*, 7, 2044. https://doi.org/10.3389/fpsyg.2016.02044