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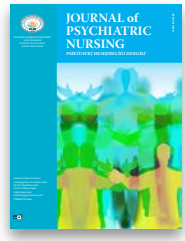

Original Article

Secondary traumatic stress, coping with earthquake stress, and disaster preparedness among social media users: A cross-sectional study

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Abstract

Objectives: This study aims to investigate the relationship between secondary traumatic stress among social media users, coping mechanisms, and disaster preparedness, as well as the factors influencing earthquake preparedness following the Turkey–Syria earthquake on February 6, 2023. Additionally, it seeks to identify the key variables influencing earthquake preparedness in this context.

Methods: The study sample comprised 785 participants. Data were collected using the Sociodemographic Characteristics Form, the Secondary Traumatic Stress Scale for Social Media Users (STSS-SM), the Coping with Earthquake Stress Scale (CESS), and the Disaster Preparedness Scale (DPS). Descriptive statistics, including frequencies, percentages, means, standard deviations, and ranges, were used to summarize the data. The relationships between the scales were analyzed using appropriate statistical methods.

Results: The findings revealed a negative correlation between secondary traumatic stress (STSS-SM) and positive reappraisal, whereas a positive correlation was observed between secondary traumatic stress and disaster preparedness. Although no significant relationship was found between religious coping and disaster preparedness, positive reappraisal and social support coping strategies demonstrated a positive association with disaster preparedness. Based on multiple linear regression analyses, the model incorporating STSS-SM, religious coping, positive reappraisal, social support, gender, marital status, and educational status was found to be statistically significant, accounting for 19.8% of the variance in disaster preparedness.

Conclusion: This study underscores the relationship between secondary traumatic stress, coping mechanisms, and disaster preparedness among social media users. Additionally, it identifies key variables influencing disaster preparedness, highlighting the importance of considering gender, educational and marital status, stress levels, and coping strategies when formulating measures to enhance disaster preparedness.

Keywords: Disaster preparedness; earthquake stress; secondary traumatic stress; social media

In extraordinary circumstances, such as global disasters and emergencies, social media plays a critical role in disseminating information rapidly, ensuring that events are communicated to the public and the world at large.[1] Under such conditions, social media platforms are often favored over traditional media outlets. Individuals increasingly rely on social media networks, particularly in situations where the urgency and significance of disaster communication are heightened. Consequently, media exposure significantly influences emotions, thoughts, and behaviors.[2] However, this process often leads to the emergence of chaos and a multiplicity of voices, which can result in numerous challenges.[3] The spread of unverified information, biased news, and graphic depictions of violence or horror can induce trauma among individuals.[4] This, in turn,

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may exacerbate societal anxiety, contributing to widespread mental distress.[5] Previous studies have indicated that the use of social media during disasters can trigger mental health issues such as anxiety, stress, and depression.[3–5]

Trauma can be defined as all psychologically and physically destructive events in an individual's life.[6] Primary traumatic stress occurs in individuals directly exposed to a traumatic event, whereas secondary traumatic stress is observed in those who witness these experiences indirectly.[2,7] Those affected by secondary traumatic stress include families and relatives of individuals who experienced the primary traumatic event, first responders and aid personnel working in traumatic environments, and individuals exposed to such events through media coverage. People who witness a traumatic process often experience a significant emotional burden. As a result, individuals who are unable to cope with this burden may exhibit cognitive and behavioral reactions, such as hyperarousal and avoidance.[7] In the literature, factors such as age, education, economic status, prior exposure to trauma, mental state, personal stress levels, social support, coping mechanisms, and exposure to extreme traumatic events have been reported as contributors to the development of secondary trauma.[8,9]

Earthquakes, which are considered traumatic events, are natural disasters that pose significant challenges to coping mechanisms. Such events can cause individuals to experience severe emotional distress or psychological stress.[10] It is known that high-stress situations can lead to long-term psychological issues, such as anxiety, major depression, and post-traumatic stress disorder (PTSD).[6] Since each individual's resources and coping mechanisms vary, they may employ either effective or ineffective strategies to manage stress. In addition to maladaptive coping methods, such as superstitions, anxiety, anger, defense mechanisms, and denial, individuals may also utilize adaptive coping strategies, such as effective communication skills and problem-solving.[11] Effective coping in the management of earthquake-related stress consists of two components. The first is identifying problems and managing the stressor, while the second involves strengthening internal and external resources that can be utilized in coping with the situation. This includes addressing and modifying maladaptive emotions and behaviors resulting from psychologically focused stress, which can mitigate mental and physical harm.[8]

Disaster preparedness primarily focuses on the pre-disaster period. It is a critical process that involves gathering necessary information, implementing precautions, planning interventions, and developing rescue and emergency strategies. The public should be educated about potential risks, and this issue should be continuously emphasized to ensure readiness.[12] The role of the media in disaster preparedness is undeniable, as it enhances public awareness and helps reduce disaster-related losses. To prevent mass panic, it is essential to utilize both traditional mass media and social media networks. From this perspective, all media personnel involved in disaster communication should possess knowledge about preparedness and disaster management to improve the overall response process.[9,10]

What is presently known on this subject?

- While social media has the potential to mitigate disaster-related stress and foster community support, it also poses a risk of exposing users to secondary traumatic stress (STS).

What does this article add to the existing knowledge?

- This research identifies a positive correlation between Secondary Traumatic Stress via Social Media (STSS-SM) and disaster preparedness, whereas a negative correlation is observed with the coping strategy of reappraisal. The proposed model accounts for 19.8% of the variance in disaster preparedness.

What are the implications for practice?

- Given these findings, psychiatric nurses, who play a pivotal role in safeguarding community mental health, should develop and implement targeted interventions to enhance disaster preparedness. It is recommended that such interventions take into account demographic factors (e.g., gender, educational and marital status), stress levels, and individual coping strategies.

The statement that disaster preparedness can elevate anxiety levels in individuals while simultaneously enhancing their coping skills can be explained by various psychological theories and scientific studies in the field of disaster psychology. First, being prepared for disasters may evoke a sense of uncertainty and heightened threat perception in individuals. Although knowledge about how to respond during a disaster provides a sense of security, this process may also heighten anxiety levels. Preparedness can foster a constant awareness of potential disasters and the necessity of readiness, which may trigger anxiety in individuals. Specifically, the continuous exposure to information about disaster scenarios through social media and similar communication tools, coupled with risk assessment and preparation efforts, may amplify threat perception. At this point, psychological theories provide support by explaining the mechanisms through which individuals develop sensory reactions and anxiety in response to perceived threats.[13,14]

However, the positive aspects of disaster preparedness should not be overlooked. Psychological research indicates that disaster preparedness enhances emotional resilience in individuals and improves their stress-coping strategies. Prepared individuals are less likely to develop post-traumatic stress disorder (PTSD) or other adverse psychological outcomes, as they possess a greater sense of control and security when confronted with unexpected situations. Preparedness can bolster individuals' coping skills and adaptive capacities, thereby strengthening their emotional and psychological resilience.[14] In this context, while preparedness may initially increase anxiety levels, it ultimately enhances individuals' ability to manage negative psychological effects following a disaster.[15]

The integration of disaster preparedness, risk assessment, and interdisciplinary management strategies plays a critical role in ensuring an effective response to the health needs of

communities in the aftermath of disasters. Research findings indicate that the greatest damage occurs in countries lacking adequate institutional, regional, or national disaster planning. Although it is not possible to completely prevent disasters, the pre-disaster preparedness period is of vital importance for individuals, organizations, and states in minimizing future damage. A high level of preparedness is a key determinant in reducing the impact of disasters.[16]

In the literature, studies on secondary traumatic stress in Türkiye have primarily focused on healthcare workers.[9,17,18] However, there is a gap in research examining the relationship between secondary traumatic stress among social media users, coping mechanisms, and disaster preparedness in Türkiye.

In this context, this study aims to investigate the relationship between secondary traumatic stress among social media users, coping mechanisms, and disaster preparedness, as well as the variables influencing earthquake preparedness following the Türkiye–Syria earthquake that occurred on February 6, 2023. For social media users following the earthquake:

1. Is there a relationship between Secondary Traumatic Stress for Social Media Users (STSS-SM), Coping with Earthquake Stress (CSES), and Disaster Preparedness?
2. Are secondary traumatic stress, earthquake-related stress coping strategies, and sociodemographic characteristics significant predictors of disaster preparedness?

Materials and Method

Study Design and Participants

This research was conducted electronically using a cross-sectional study design. The data collection form was developed and distributed online via an online survey platform. Participants were recruited through paid digital advertisements on online platforms, and voluntary participation was conducted between March 9 and March 30, 2023.

The population of the study consisted of voluntary Turkish individuals who had not experienced the February 6, 2023, Türkiye–Syria earthquake, were literate, and were aged 18 and over. The sample size was calculated as at least 280 using the "sample size formula for an unknown population". The data were collected from 865 participants. Of these participants, 80 were excluded from the sample because they were earthquake victims or aged below 18. The study was completed with 785 people.

Measurements

Sociodemographic Characteristics

This section consists of questions regarding the participants' age, gender, marital status, social media platforms used, daily usage duration, whether they have received training on disaster preparedness, and their perceived readiness for disasters.

Secondary Traumatic Stress Scale for Social Media Users (STSS-SM)

Mancini[19] developed the STSS-SM to assess social media users exposed to indirect traumatic experiences through social media use. The scale comprises 17 items and includes three sub-dimensions: intrusion (5 items), avoidance (7 items), and arousal (5 items). According to the EFA results, the single-factor structure of the STSS-SM is more effective. A high score on the scale indicates a high level of secondary traumatic stress (STS) caused by social media, while a low score indicates a low level of STS. Balcı Çelik and Altınışık[20] conducted a Turkish adaptation study to assess its validity and reliability. In this study, the Cronbach's alpha coefficient was found to be 0.91.

Coping with Earthquake Stress Scale (CESS)

The CESS, developed by Yöndem and Eren,[21] measures individuals' strategies for coping with earthquake-related stress. The scale consists of 16 questions and three subscales: religious coping (5 items), positive reappraisal (6 items), and seeking social support (5 items). A high score on the subscales indicates that the individual uses that coping strategy more frequently, while a low score indicates less frequent use.[17] The Cronbach's alpha coefficient was found to range between 0.71 and 0.86 in this study.

Disaster Preparedness Scale (DPS)

The DPS, developed by Şentuna and Çakı,[12] comprises 13 items and four subscales: disaster physical protection, disaster planning, disaster aid, and disaster warning systems. The level of disaster preparedness increases with higher scores.[12] In this study, the Cronbach's alpha coefficient ranged between 0.66 and 0.84.

Ethical Approval

The study was approved by the Sakarya University Social and Humanities Ethics Committee (2023/56–14). Individuals who volunteered to participate in this study were informed according to the Declaration of Helsinki. Written and verbal consent was obtained from the participants. Participants were informed by the authors that anonymity was carefully protected.

Statistical Analysis

The data were analyzed using IBM SPSS Statistics 23 and IBM SPSS AMOS 23 programs. In data evaluation, frequency distributions were used for categorical variables, and descriptive statistics were used for numerical variables. The Cronbach's alpha value was used to test scale reliability. Pearson's correlation analysis was used to examine the relationships between the scales, and multiple linear regression analysis was used to examine the subscales of the CESS and the factors affecting the DPS. A p-value of <0.05 was considered statistically significant.

Table 1. Participants' characteristics

	Min-max	Mean±SD
Age (year)	18.00–72.00	36.52±11.62
	n	**%**
Gender		
Male	562	71.6
Female	223	28.4
Marital status		
Married	499	63.6
Single	286	36.4
Education status		
Primary school	31	3.9
High school	143	18.2
University	611	77.8
Economic status		
Low	101	12.9
Moderate	583	74.3
High	101	12.9
Purpose of social media use		
Listening to music	314	40.0
Following the agenda	675	86.0
Playing games	150	19.1
Researching	403	51.3
Work-oriented	167	21.3
Watching movies	264	33.6
Communication (Msn, e-mail, Whatsapp vb.)	608	77.5
Communicating with friends	470	59.9
Other	19	2.4
Type of social media used		
Whatsapp	722	92.0
Instagram	681	86.8
Youtube	496	63.2
Twitter	318	40.5
Facebook	303	38.6
Pinterest	105	13.4
Tiktok	85	10.8
Snapchat	71	9
Other	12	1.5
Telegram	6	0.8
Duration of social media use (hour/day)		
0-1 hours	88	11.2
2-3 hours	338	43.1
4-5 hours	248	31.6
6-7 hours	66	8.4
Definition of disaster		
Natural disasters such as earthquakes, landslides	464	59.1
Outbreaks of diseases with a very high transmission rate such as swine flu and bird flu	73	9.3
Terrorist acts with biological, chemical, or explosive agents	66	8.4
Human losses due to dents in mines such as coal and gold	128	16.3
All of them	364	46.4
Receiving disaster training		
Yes	528	67.3
No	257	32.7
Type of disaster training		
Fire	362	46.1
Earthquake	377	48.0
Being affected by 6 February Earthquake		
Yes, it affected positively	58	7.4
Yes, it affected negatively	594	75.7
Partial -positively affected	19	2.4
Partial - negatively affected	104	13.2
No effect	10	1.3
Disaster preparedness		
Yes	27	3.4
No	571	72.7
Partial	187	23.8
Total	785	100.0

Min: Minimum; Max: Maximum; SD: Standard deviation.

Results

Characteristics of Participants

The mean age of the participants was 36.52±11.62 (min=18, max=72). Of the participants, 28.4% were female, 63.6% were married, 77.8% had a bachelor's degree, and 74.3% had a moderate economic status. The top three social media platforms most frequently used by the participants were WhatsApp (92.0%), Instagram (86.8%), and YouTube (63.2%). Regarding the average daily duration of social media use, the majority (43.1%) reported using it between 2 and 3 hours. The rate of participants who had participated in a disaster-related drill was 67.3%. Among these, 46.1% participated in fire drills, and 48.0% participated in earthquake drills. When asked, "Do you think that the news about the earthquake on February 6, 2023, on social media affected you?", the majority of participants (75.7%) responded, "Yes, it affected me negatively." Additionally, 72.7% of the participants stated that they were unprepared for any disaster (Table 1).

Descriptive Statistics and Correlation Analysis

The total and sub-dimension mean scores of the participants for the STSS-SM, CESS, and DPS are presented in Table 2. The to-

Table 2. Descriptive statistics of the scale

	Min	Max	Mean	SD
STSS-SM	17.00	85.00	50.58	12.70
CESS religious coping	5.00	20.00	13.96	4.03
CESS positive reappraisal	6.00	24.00	16.8	3.66
CESS social support	5.00	20.00	13.42	3.02
DPS physical protection	5	21	12.69	2.32
DPS planning	3	12	7.09	1.95
DPS aid	3	12	8.22	1.51
DPS warning systems	2	8	4.21	1.05
DPS total	13	53	32.23	5.02

Min: Minimum; Max: Maximum; SD: Standard deviation; STSS-SM: Secondary traumatic stress scale for social media users; CESS: Coping with earthquake stress scale; DPS: Disaster preparedness scale.

tal mean score for the STSS-SM was 50.58±12.70. For the CESS sub-dimensions, the mean scores were 13.96±4.03 for religious coping, 16.8±3.66 for positive reappraisal, and 13.42±3.02 for social support. Regarding the DPS sub-dimensions, the mean scores were 12.69±2.32 for physical protection, 7.09±1.95 for planning, 8.22±1.51 for aid, and 4.21±1.05 for warning systems. The total mean score for the DPS was 32.23±5.02 (Table 2).

A significant positive correlation was observed between the STSS-SM and the CESS positive reappraisal subscale, the DPS physical protection subscale, and the total DPS score ($p<0.05$). Furthermore, statistically significant positive correlations were found between the CESS positive reappraisal subscale and the DPS subscales and total score, as well as between the CESS social support subscale and the DPS and its subscales, as detailed in Table 3 ($p<0.05$).

Factors Effective on Disaster Preparedness

Table 4 presents the multiple linear regression analysis of variables affecting disaster preparedness. The regression analysis results were found to be statistically significant ($F=20.341$, $p<0.001$). According to the model, the variables included in the table explain 19.8% of the variance in disaster preparedness. A 1-unit increase in STSS-SM leads to a 0.266-unit increase in disaster preparedness. A 1-unit increase in religious coping results in a 0.073-unit decrease in disaster preparedness. Additionally, a 1-unit increase in positive reappraisal increases disaster preparedness by 0.150 units, while a 1-unit increase in social support causes a 0.082-unit increase in disaster preparedness. Being female is associated with a 0.067-unit decrease in disaster preparedness, and living alone results in a 0.115-unit decrease. Furthermore, education level—specifically, a 1-unit increase corresponding to primary school completion—contributes to a 0.073-unit increase in disaster preparedness.

Discussion

In this section of the study, the relationships between secondary traumatic stress among social media users, coping mechanisms, and disaster preparedness, as well as the factors influencing disaster preparedness, are discussed.

In this study, it was found that 72.7% of participants who observed a disaster through social media indicated that they were not prepared for such an event. Similarly, according to the Türkiye Disaster Awareness and Preparedness Survey, 70% of the participants reported being unprepared for disasters.[22] Furthermore, in a study conducted among individuals working in the disaster management field, it was emphasized that efforts to mitigate disaster-related damage and enhance public awareness have been initiated by relevant institutions and organizations. However, it was noted that the effectiveness of informative posters, brochures, and booklets is limited due to the prevalent lack of reading habits in society. Additionally, the quality and reliability of disaster-related information on social

Table 3. Correlation between scales and subscale

	1	2	3	4	5	6	7	8	9
1. STSS-SM	1								
2. CESS religious coping	0.059	1							
3. CESS positive reappraisal	-0.299*	0.302*	1						
4. CESS social support	0.047	0.015	0.142*	1					
5. DPS physical protection	0.379*	-0.012	-0.042	0.154*	1				
6. DPS planning	0.057	0.028	0.130*	0.126*	0.420*	1			
7. DPS aid	-0.003	-0.006	0.139*	0.120*	0.340*	0.385*	1		
8. DPS warning systems	-0.058	-0.022	0.151*	0.027*	0.303*	0.351*	0.372*	1	
9. DPS total	0.184*	-0.001	0.105*	0.162*	0.792*	0.773*	0.687*	0.599*	1
Mean±SD	50.59±12.71	13.97±4.03	16.81±3.66	13.43±3.03	12.7±2.32	7.09±1.96	8.22±1.52	4.22±1.06	32.23±5.03
Min-max	18-85	5-20	6-24	5-20	5-21	3-12	3-12	2-8	13-53

*: $p<0.05$. STSS-SM: Secondary traumatic stress scale for social media users; CESS: Coping with earthquake stress scale; DPS: Disaster preparedness scale; SD: Standard deviation; Min: Minimum; Max: Maximum.

Table 4. Factors effective on disaster preparedness

Dependent variable: Disaster preparedness scale	Non-standardized coefficient		Standardized coefficient	t	p	95.0% CI			
	B	SE	Beta			Lower limit	Upper limit	Test value	
Constant	29.116	1.729		16.843	0.000	25.722	32.509	F=20.341 p<0.001	R^2=0.208 Adj. R^2=0.198
STSS-SM	0.105	0.014	0.266	7.383	0.000	0.077	0.133		
Religious coping	-0.091	0.043	-0.073	-2.100	0.036	-0.176	-0.006		
Positive reappraisal	0.205	0.051	0.150	4.027	0.000	0.105	0.306		
Social support	0.136	0.056	0.082	2.434	0.015	0.026	0.246		
Gender=female	-0.746	0.392	-0.067	-1.904	0.057	-1.515	0.023		
Marital status=single	-1.198	0.348	-0.115	-3.443	0.001	-1.881	-0.515		
Education status bachelor's/primary school	0.883	0.410	0.073	2.155	0.031	0.079	1.687		

t: Student's t-test; CI: Confidence interval; B: Standard beta coefficients; SE: Standard error; STSS-SM: Secondary traumatic stress scale for social media users.

media require significant improvement.[23] In another study, it was revealed that among the reasons why the participants did not prepare for an earthquake, negligence ranked highest, with a rate of 82.8%. This was followed by fatalism, inadequate economic conditions, tenancy status, and the belief that an earthquake would not ocur.[24] Candidate teachers who were affected by the earthquake reported that they were not prepared for a potential earthquake, noting that their knowledge of appropriate actions during an earthquake required improvement and that there were limited experimental studies on disasters.[25] This suggests that experience plays a significant role in raising awareness about disaster preparedness.[26] In this context, it is argued that training delivered through social media or other mass media platforms could be more accessible, effective, and sustainable compared to traditional training methods.

This study found that 86% of the participants followed earthquake-related information through social media, and 88.9% reported being negatively affected. Additionally, the participants' average scores on the STSS-SM were found to be moderate. These findings suggest that they may be at risk of secondary trauma. In previous studies, it was observed that earthquakes and natural disasters are deeply rooted in societies' memories, and individuals from all age groups who followed the media were more open to internalizing messages from mass media and experienced stress symptoms.[27] In some studies in the literature, it was reported that the negative effects of indirect exposure to traumatic events are comparable to those of direct exposure.[28] Although the emotions and reactions in the case of indirect exposure are not as intense as in the case of direct exposure, they can still be stressful for people. The National Institute of Mental Health stated that hopelessness, fear, guilt, and physical discomfort are common secondary traumatic stress responses.[6]

In this study, it was determined that as the level of secondary traumatic stress increased, participants' use of the positive reappraisal strategy in coping with earthquake stress decreased. This indicates that individuals under stress may struggle to use positive reappraisal as a coping mechanism. It can be said that positive reappraisal decreases in individuals under stress due to material and moral losses in disasters, fear of death, and difficulties in decision-making and problem-solving skills. Research shows that an individual's stress can be reduced when positive reappraisal is facilitated.[25]

This study showed that as the level of secondary traumatic stress increased, the score on the physical protection subscale also increased. This result indicates that as people's stress levels increase, they tend to focus more on physical safety and protection measures in case of disaster. In a study conducted with individuals who experienced an earthquake, it was reported that the primary measure was training activities for earthquake precautions, and that the participants also took measures for physical protection, such as securing items that could fall during an earthquake, strengthening the building and its foundation, and ensuring proper housing construction.[29] This result is consistent with the findings of this study. Based on the findings, it can be suggested that secondary traumatic stress serves as a motivator for physical protection against disasters.

This study demonstrated that as secondary traumatic stress associated with social media usage (STSMM) increases, disaster preparedness also increases. The regression analysis revealed that a one-unit increase in STSMM leads to a 0.266-unit increase in disaster preparedness. This finding suggests that when stress is maintained at a controlled and healthy level, individuals do not lose their functionality but instead take proactive steps toward disaster preparedness. The positive ef-

fects of stress on creativity further indicate that stress triggers an active mental state, which fosters creativity. Specifically, stress is believed to activate an alert and motivated mindset, encouraging the development of innovative and creative solutions.[30] In contrast to this study, one study showed that individuals with access to emergency and disaster information had significantly lower stress levels.[31] The diversity of the results in the literature may be attributed to differences in the measurement tools used in the research.

This study found no significant relationship between religious coping strategies and disaster preparedness. In contrast to this finding, it is well known that the belief, common in many societies, that "natural disasters are a punishment from God" negatively impacts disaster preparedness.[32] On the other hand, increased religious coping, combined with faith in the Creator, can strengthen awareness of the value of life and a sense of responsibility.[33] The divergence of this study's findings may be explained by the perception of disasters as natural events rather than divine interventions. However, religious coping strategies emerged as significant within the regression model in this study. This finding suggests that religious coping alone does not influence disaster preparedness but becomes meaningful when considered alongside other factors.

A study found a significant relationship between taking precautions against earthquakes, disaster preparedness, perceived benefits, perceived responsibility, and the use of problem-focused coping strategies.[34] The belief that individuals can overcome negative situations, whether experienced directly or indirectly, by becoming stronger and achieving long-term gains strengthens their coping strategies through positive reappraisal. This strategy has been reported to enhance psychological well-being and reduce stress.[35] In this study, it was determined that an increase in positive reappraisal, which is effective in coping with earthquake stress, improved preparedness in disaster planning, relief efforts, and warning systems. The regression analysis revealed that a one-unit increase in positive reappraisal led to a 0.150-unit increase in disaster preparedness. It can be concluded that problem- and emotion-focused approaches facilitate reappraisal, thereby enhancing coping strategies and contributing to disaster preparedness.

The presence of social support is effective in mitigating stress. Variables such as emotional sharing, information transfer, and the availability of social support resources can mitigate the impact of stress.[36] This study found that social support, which plays a significant role in coping with earthquake stress, strengthens disaster preparedness strategies, including physical protection, planning, relief efforts, and warning systems. In this context, it can be argued that individuals' disaster preparedness is positively influenced when social support resources are sufficiently accessible and utilized to cope with earthquake stress. Environmental characteristics, such as community infrastructure and resource availability, have been identified as external factors influencing disaster preparedness.[31] For instance, a study involving survivors of the 1999 Marmara earthquake reported that increased perceived social support post-trauma positively influenced post-traumatic recovery and resilience.

In this study, regression analysis was conducted to examine the variables affecting disaster preparedness. The model, which included secondary traumatic stress, religious coping, positive reappraisal, social support, female gender, loneliness, and education level in the context of social media use, was found to be significant. This model explained 19.8% of the variance in disaster preparedness. The analysis revealed that women had lower levels of disaster preparedness. This result is thought to be related to factors such as hormonal changes, genetic predisposition, and emotional regulation processes associated with the female gender. These findings align with similar results in the literature. For example, in a study conducted with pre-service teachers in Indonesia, it was reported that men were more prepared than women in terms of resource mobilization, warning systems, planning, and basic disaster knowledge.[37] Another study showed that women are more vulnerable and disadvantaged during disasters due to stress, fear of loss, anxiety, and concerns about safety and family well-being, which negatively affects their disaster preparedness.[38] In contrast to this study, one study investigating disaster preparedness and perceptions of preparedness found no significant difference between genders.[39] Similarly, another study reported no significant relationship between disaster preparedness levels and gender.[31]

In this study, the level of disaster preparedness among individuals with bachelor's degrees was higher than that of primary school graduates. Similarly, a study conducted on prospective teachers reported that the level of disaster awareness and perception increased as the level of education increased.[40] In another study conducted in Türkiye, it was found that individuals with higher education levels had greater knowledge and awareness of disasters.[41] Overall, it can be suggested that higher education levels among individuals, and consequently within society, are a significant factor in disaster preparedness. Additionally, a study conducted in Nepal revealed that individuals were generally unaware of disaster-related issues, and the level of disaster knowledge decreased as educational attainment declined.[42]

In this study, it was found that living alone decreases earthquake preparedness by 0.115 units. This finding may be related to the fact that lonely individuals are generally less prepared for disasters due to a reduced sense of responsibility or motivation. One possible explanation is that married individuals, particularly those with children, tend to be more prepared for disasters due to the instinct to protect their families. In contrast, the need for and awareness of such measures may be

lower in lonely individuals. Previous studies have stated that individuals with families have higher disaster preparedness.[43,44] However, contrary to this finding, one study showed that living alone is associated with better disaster preparedness.[31]

Limitations

It is important to consider several limitations of this research. First, as a cross-sectional study, this research is limited to evaluating secondary traumatic stress, coping with earthquake stress, and disaster preparedness at a single point in time, without follow-up observations of participants who did not experience the February 6, 2023, Türkiye–Syria earthquake and used social media tools. Second, due to the relatively small sample size, the results are limited to the participants in the sample. Therefore, future studies should aim to include larger and more diverse populations. Finally, since the scales used in the study are based on self-report, the results are partially subjective, as they rely on participants' own evaluations.

Conclusion

The findings of this study revealed significant relationships between secondary traumatic stress levels, coping mechanisms, and disaster preparedness among social media users. The data obtained from this research highlighted key factors influencing individuals' preparedness for disaster situations. It was observed that gender, particularly being female, should be taken into consideration when implementing measures for disaster preparedness. Furthermore, it was determined that higher education levels had a positive effect on readiness. Additionally, living alone was found to influence preparedness before and during disasters. Another important finding of this study is that an increase in STSMM leads to an increase in disaster preparedness. Stress coping mechanisms were found to be effective in enhancing disaster preparedness.

In line with the results of this study, various strategic recommendations can be developed to increase disaster preparedness. In this context, the importance of gender (particularly being female), education level, and living alone should be considered in pre-disaster awareness and training programs. Moreover, supportive psychosocial interventions to improve stress coping skills should be integrated into disaster preparedness programs. This study aims to contribute to future research on disaster preparedness and policy development processes.

Psychiatric nursing plays an important role in safeguarding community mental health. In particular, psychiatric nurses make significant contributions to protecting and improving mental health, especially in disaster preparation and post-disaster interventions.[45] Psychiatric nurses can identify the needs of individuals and demonstrate leadership by assessing the risk factors of disasters and minimizing potential threats.

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