




Research Article

Social Support and Resilience among 2023 Türkiye Earthquake Survivors: Spirituality as a Mediator

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Abstract

Exposure to earthquakes can have negative effects on the resilience of survivors. However, various factors may have a buffering effect on the resilience levels of earthquake survivors. This study aims to examine the mediating role of spirituality in the relationship between social support and resilience among 2023 Türkiye earthquake survivors. A total of 473 earthquake survivors, 293 female (61.9%) and 180 male (38.1%) participated in the study. The age range of earthquake survivors participating in the study ranges from 18 to 34. Multidimensional Scale of Perceived Social Support (MSPSS), Brief Resilience Scale, and Spiritual Orientation Scale were used to collect data from earthquake survivors who directly experienced the earthquake. Results show significant positive relationships between social support, resilience, and spirituality. Also, the relationship between social support and resilience was mediated by spirituality. Research findings indicate that social support and spirituality can contribute to the recovery process of earthquake survivors after traumatic events. It is recommended that researchers and practitioners provide systematic social support for earthquake survivors. In addition, spiritual intervention methods can contribute to the resilience levels of earthquake survivors.

Keywords:

Social Support • Resilience • Spirituality • Earthquake

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Introduction

Earthquakes are major natural disasters that affect the lives of millions of people. On February 6, 2023, two devastating earthquakes affected a wide geography in Türkiye and caused significant changes in the lives of millions of people. Natural disasters such as earthquakes generally increase the psychological stress of earthquake survivors and naturally decrease their quality of life. In addition, depressive symptoms and post-traumatic stress disorder can be seen in many earthquake survivors after earthquakes (Tang et al., 2018; İme, 2023). Despite the devastating effects of earthquakes, some individuals are not as affected by this negative situation as others. One of the important factors that protect them against negative situations is resilience (Meng et al, 2018).

Resilience is defined as an individual's problem-solving ability, or ability to overcome adversities (Zautra et al., 2010). Studies show that resilience plays an important role in improving well-being and psychological growth in adverse situations (Bonanno et al., 2010). It is claimed that sometimes stress factors increase resilience (Crane et al., 2018). Resilience, which is a protective factor against mental health problems or adverse conditions, can contribute to the mental health of earthquake survivors (Fu et al., 2013). The ability to regulate emotions in challenging conditions is also positively associated with resilience (İme & Ümmet, 2022). Because individuals with high resilience levels have a higher capacity to adapt quickly to the negativities experienced despite the traumatic experiences (Rajkumar et al., 2008). Resilience can be seen as a protective shield that makes it easier for earthquake survivors to cope with the negative situations they have experienced. When the factors contributing to the resilience levels of earthquake survivors are examined, it is seen that spirituality and social support (İkizer et al., 2016) are positively related to resilience.

Survivors often use a wide variety of coping strategies when they experience trauma, crisis, or stressful events. Spirituality is an important factor in post-traumatic recovery (Vis & Boynton, 2008). Many survivors often turn to religion or spirituality when they face with distress or trauma. In general, spirituality is useful in coping with difficulties (Shaw et al., 2005). Similarly, studies confirm that many people who experience a traumatic event view their difficulties from their spiritual perspective (Chen & Koenig, 2006). Research indicates that traumas have both positive and negative effects on individuals' spiritual experiences (Ano & Vasconcelles, 2005). For example, depressive symptoms and shock experienced in the first place may suggest that the individual is punished by God. However, as time passes, the individual can get rid of this situation. On the other hand, some individuals may feel closer to God after traumas. Similarly, they may experience an increase in the meaning and purpose of life and spiritual well-being (Milstein, 2019). All these studies support that spirituality can positively affect resilience, especially after disasters such as earthquakes.

Like spirituality, social support also accelerates the recovery process of survivors after disasters (Mesidor & Sly, 2019). Social support enables individuals to feel that family, friends, or society is available to them after disasters. Feeling and seeking social support after natural disasters is one of the strategies to cope with negativities (Xu & Ou, 2014). Earthquake survivors who perceive a high level of social support show low levels of depression and anxiety symptoms (Xu & Liao, 2011). Guo et al. (2018) study with earthquake survivors indicates that a high level of social support is associated with a low level of post-traumatic stress disorder as well as reduced suicidal thoughts. Therefore, it is evaluated that social support contributes positively to resilience.

Present Study

Social support helps earthquake survivors to cope with the negative effects of the earthquake and to get rid of its negative effects (Xi et al., 2020). Similarly, it is stated in the studies that spirituality is an important factor that positively affects the psychological resilience levels of earthquake survivors. Also, spirituality is an important factor in coping effectively with the negative situation experienced (Blanc et al., 2016). Therefore, it is evaluated that spirituality and social support contribute to earthquake survivors' coping with the effects of the devastating earthquake and their resilience levels.

Recent studies indicate that resilience is a personal trait that not only protects individuals from the negative effects of traumatic events but also improves their well-being and post-traumatic growth (Henson et al., 2021). It is considered research to determine the negative effects of earthquakes on survivors and to improve their resilience levels. For this reason, it is considered important to identify resilience-related factors to improve the skills of earthquake survivors to cope with traumatic events. Spirituality is considered a potential factor that facilitates earthquake survivors' adaptation to a new situation. Spirituality can reduce the negative impact of earthquakes on survivors' resilience and protect them from the negative effects of post-earthquake stress. Spirituality can be a psychological tool to overcome the difficulties faced by earthquake survivors. In addition, spirituality can increase resilience and contribute to earthquake survivors in adverse situations. When the literature is examined, it is seen that after the 2023 Türkiye earthquakes, a study that combines these variables has not yet been conducted with earthquake survivors. This increases the importance of the research. The current study aims to examine the mediating role of spirituality in the relationship between social support and resilience of earthquake survivors affected by the 2023 Türkiye earthquakes. In line with this main purpose, the hypotheses of the research were determined as follows:

- H1.* There is a positive relationship between social support and resilience.
- H2.* There is a positive relationship between social support and spirituality.
- H3.* There is a positive relationship between spirituality and resilience.
- H4.* Spirituality mediates the relationship between social support and resilience.

Method

Participants

The present study was carried out approximately 3 months after the earthquakes in Türkiye on February 6, 2023. The criterion for inclusion in the study was determined as being directly affected by the February 6, 2023 earthquakes in Türkiye. All participants in the study participated voluntarily. All participants in the research consist of earthquake survivors who live in cities affected by the earthquake in Türkiye on February 6, 2023. Informed consent was obtained from all participants. Data were collected through online channels. A total of 473 earthquake survivors over the age of 18 participated in the study. The ages of the participants ranged from 18 to 34 ($M_{\text{age}} = 24.28, SD = 4.49$).

Measures

Multidimensional scale of perceived social support (MSPSS). Zimet et al. (1988) developed the scale. Eker et al. (2000) adapted the scale into Turkish. The scale, which has a 7-point Likert structure consists of 12 items. Perceived social support according to the scale is determined by the support received from family, friends, and important people. In line with the hypotheses created in the current study, the general perceived social support score average was taken as a basis. The psychometric properties of the scale indicate that it is a valid and reliable measurement tool. In the current study, the reliability coefficient of the scale was found to be sufficient ($\alpha = .84$).

Brief resilience scale. Smith et al. (2008) developed a scale to measure the resilience levels of individuals. The scale was adapted into Turkish by Doğan (2015). The scale, which consists of 6 items has a 5-point Likert structure. The psychometric properties of the scale showed that it is a valid and reliable instrument. In the current study, the reliability coefficient of the scale was found to be sufficient ($\alpha = .82$).

Spiritual orientation scale. Kasapoğlu (2015) developed it to determine the spiritual orientation. The scale consists of 16 items. The scale has a single-factor structure and a 7-point Likert structure. The psychometric properties of the scale showed that it is a valid and reliable instrument. In the current study, the reliability coefficient of the scale was found to be sufficient ($\alpha = .80$).

Data Analysis

Before starting the analysis of the data, a preliminary assumptions test was carried out. In line with the recommendations of Tabachnick & Fidell (2013), the normality values of the data sets were tested by calculating skewness and kurtosis values. The relationships between the study variables were first calculated by the correlation values. Subsequently, the mediation model was tested using Process Macro (Model 4, Hayes 2017). Gender and age variables were included in the analysis as covariates. Process macro is a program for calculating direct and indirect effects as well as path analysis between variables and mediation effects (Hayes, 2017). The relations between the variables were made by calculating the beta coefficients (β). Also, whether the indirect effects were significant or not was calculated using 5000 bootstrap samples (95% CI). Analyses were performed in SPSS version 28.

Results

Correlations

The correlation between the variables, descriptive statistics, and reliability coefficients are given in Table 1. Resilience is positively correlated with social support ($r = .40, p < .001$) and spirituality ($r = .33, p < .001$). In addition, there is a positive correlation between spirituality and social support ($r = .48, p < .001$).

Table 1
Descriptive statistics and correlations between variables (N=473)

| Variables | 1 | 2 | 3 | α | M | SD | Skewness | Kurtosis |
|-------------------|-------|-------|---|----------|------|------|----------|----------|
| 1. Social Support | - | | | .84 | 4.23 | 1.49 | .188 | -.950 |
| 2. Spirituality | .48** | - | | .80 | 4.15 | 1.76 | .262 | -1.227 |
| 3. Resilience | .40** | .33** | - | .82 | 3.15 | 1.08 | -.124 | .150 |

** $p < .001$

Statistical Assumption Tests

The results show that the skewness varies between -.124 and .262 and kurtosis between -1.227 and .150. All reliability coefficients were found to be quite above .70. The variable inflation values were detected as 1.13-1.29, tolerance values as .72, .78, and Durbin Watson value as 1.98. Findings indicate that there is no multicollinearity and residual problem (See Table 1). Therefore, all assumptions have been met as Field (2013) suggests.

Mediational Analysis

The findings of the mediation analysis are given in Figure 1. Findings affirm hypothesis 1 and the fact that social support has a positive effect on resilience ($\beta = -.296, p < .001$). This coefficient decreased when the mediating variable

(spirituality) was included in the model, but it was still found to be statistically meaningful (direct effect, $\beta = -.234, p < .05$). Spirituality is a positive predictor of social support ($\beta = .565, p < .001, H2$) and resilience is a positive predictor of spirituality ($\beta = .109, p < .001, H3$).

Figure 1.
Results of the mediation model, $**p < .001$. The values shown are non-standardized coefficients.

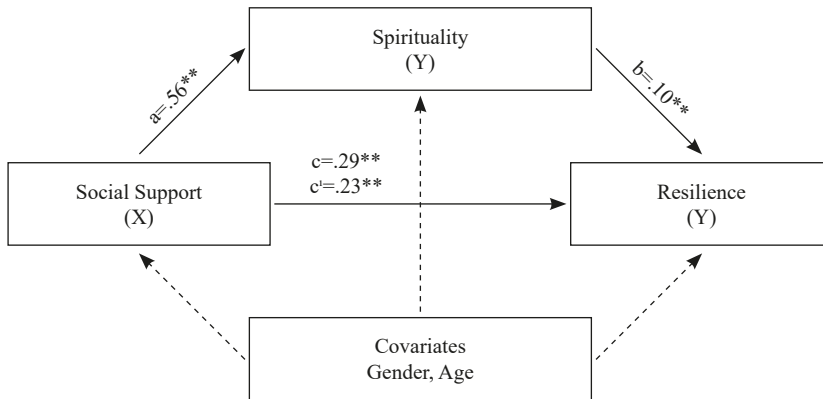


Table 2 shows the effect of social support on resilience through spirituality. Research findings also affirm hypothesis 4. Findings have found a significant indirect effect of social support on resilience through spirituality ($\beta = .061, SE = .018, 95\% CI = [.025, .099]$). It may be indicated that there is an indirect relationship between social support and resilience. Thus, spirituality partially mediates this relationship.

Table 2
Indirect Effect of Social Support on Resilience via Spirituality

| Path | | Coefficient | 95% CI | |
|-----------------------|-------------------------|-------------|--------|------|
| | | | LL | UL |
| Social Support | Spirituality Resilience | .061 | .025 | .099 |
| Total Effect | | .296 | .236 | .356 |
| Direct effect | | .234 | .167 | .301 |
| Total indirect effect | | .061 | .025 | .099 |

CI confidence interval, LL lower limit, UL upper limit

Discussion

In this study, the mediating role of spirituality in the relationship between social support and resilience of Türkiye earthquake survivors of February 6, 2023, was examined. Findings determined that social support is a positive predictor of resilience of earthquake survivors. In addition, the findings also showed that spirituality has a mediating effect on the relationship between social support and resilience.

The present results confirm previous studies showing the contribution of social support to individuals' resilience levels after natural disasters. For example, Xi et al. (2020) found that high social support was associated with high resilience among earthquake survivors. Also, social support and resilience can protect earthquake survivors from anxiety, stress, and depression that earthquakes may cause. Again, Wang et al. (2022) determined that the social support perceived by earthquake survivors from their environment can reduce their negative feelings and is positively related to their resilience levels. In general, individuals who can reach adequate social support after disasters can maintain good relations with their environment, which contributes to their reaching a higher level of resilience (Kang et al., 2018). So, the perceived social support of earthquake survivors may help them cope with stressful situations, which may contribute to their resilience. The findings show the importance of the social support provided to the earthquake survivors by both non-governmental organizations and the state after the earthquake.

The findings of the study showed that there is a positive relationship between social support and spirituality. Thus, the second hypothesis of the study was also confirmed. Feder et al. (2013) found that high perceived social support was associated with positive emotions in their study about Pakistan earthquake survivors. Also, Mesidor & Sly (2010) found a positive relationship between perceived social support and religion and spirituality by 2010 Haiti earthquake survivors. Perceived social support and post-traumatic growth are positively associated with spirituality (Garcia et al., 2014). Social support can allow earthquake survivors to connect with others. In addition, social support can shield them from developing negative emotions and contribute positively to their spiritual orientation.

Findings that show a positive relationship between spirituality and resilience also confirm the third hypothesis of the study. Studies in the literature support this finding. Spirituality has a healing effect against stress and negative emotions caused by earthquakes (Stratta et al., 2013). Experiencing a sense of sacredness and orientation to spirituality after tragedy and loss such as earthquakes and wars have a positive effect on individuals' coping skills (Captari et al., 2019). Also, Park & Blake (2020) state that spirituality and religiosity accelerate the recovery process of individuals after natural disasters. As a result, it can be stated that spirituality helps earthquake survivors cope with negative situations and contributes to their resilience.

The last hypothesis of the present study was also confirmed. The findings show that spirituality has a mediating effect on the relationship between social support and resilience. The present finding indicates that high levels of social support in earthquake survivors can positively affect resilience both directly and through spirituality. The present finding supports previous studies in the literature. Aten et al. (2019) conducted a

meta-analysis study on spirituality and coping skills of religion after natural disasters. Research findings show that spirituality and religion have positive effects on disaster survivors. Similarly, spirituality contributes to the resilience of earthquake survivors. In addition, spirituality may reduce earthquake survivors' possibility of depression and post-traumatic stress disorder (Blanc et al., 2016). Again, the study conducted with the 2011 Van earthquake survivors (Doğulu et al., 2016) shows that spirituality contributes positively to the earthquake survivors' adaptation to their new lives and can increase their resilience. As a result, spirituality can make it easier for earthquake survivors to cope with the negativities experienced. In addition, it can contribute to accepting the process and gaining a positive perspective. These factors can also positively affect resilience levels. Thus, spirituality can allow individuals to develop positive emotions, and be satisfied with their lives.

When the relevant literature is examined, it is seen that the current study is a pioneering study that deals with the social support and spirituality associated with resilience of 2023 Türkiye earthquake survivors. The current research points out the importance of social support for earthquake survivors to cope with negative emotions, to cope effectively with the trauma experienced, and to hold on to life again after devastating earthquakes. Social support can make earthquake survivors feel that they are not alone and can also provide emotional support and encouragement. For this reason, it is considered that meeting the nutritional, sheltering, psychological, and medical needs of earthquake survivors after the earthquake and in the ongoing process will facilitate their recovery. Again, the present study reveals the important role of spirituality in coping with the devastating effects of the earthquake. Spirituality can lead individuals to question life and search for meaning. Spiritual-oriented programs for earthquake survivors who have lost their relatives can be beneficial for them in the process of loss and mourning. It can also offer emotional support.

Limitations and suggestions

The present study indicates that social support and spirituality can be protective factors for earthquake survivors. In addition, the data in the current study were collected through questionnaires. Social desirability and prejudice may be impossible to eradicate. Again, since the study is a survey design, it eliminates the possibility of establishing causality between the variables. Finally, although variables that may be related to resilience of earthquake survivors were discussed; there may be other protective and risk factors that may be associated with resilience. Thus, it would be appropriate to conduct qualitative studies in grounded and phenomenology designs. Despite these limitations, the study shows that social support and spirituality are positive predictors of resilience. It is recommended that social support provided by close relatives, and non-governmental and state organizations should continue

to increase the resilience levels of earthquake survivors. Similarly, it is considered that practices that improve the spirituality of earthquake survivors will contribute positively to their resilience levels.

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Ethical approval. Ethical approval of the current study was obtained from Necmettin Erbakan University Social and Human Sciences Ethics Committee (Board Number: 2023/461).

Peer-review. The research was evaluated by two or more field experts and the research was developed in line with their opinions.

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