

# Investigation of Healthy Lifestyle Behaviors and Life Satisfaction Among Individuals Living in Post-Earthquake Container Settlements: A Descriptive Cross-Sectional Study

## Deprem Sonrası Konteyner Kentlerde Yaşayan Bireylerin Sağlıklı Yaşam Biçimi Davranışları ve Yaşam Tatminlerinin İncelenmesi: Tanımlayıcı Kesitsel Çalışma

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This study was prepared based on the findings of Gülüzar Kurt Ateş's thesis study titled "Investigation of Healthy Lifestyle Behaviors and Life Satisfaction Among Individuals Living in Post-Earthquake Container Settlements" (Hatay: Hatay Mustafa Kemal University; 2024).

**ABSTRACT Objective:** This study explored the relationship between life satisfaction and healthy lifestyle behaviors among residents of Kahramanmaraş Umut Kent Container City between January and April 2024. **Material and Methods:** This descriptive cross-sectional study included 353 adults affected by the February 6, 2023 Kahramanmaraş Earthquake and residing in temporary container housing. Data were collected via face-to-face interviews using the Personal Information Form, Healthy Lifestyle Behaviors Scale II, and the Life Satisfaction Scale. Descriptive statistics, Pearson correlation, t-tests, one-way analysis of variance, and linear regression analyses were performed, with  $p < 0.05$  considered statistically significant. **Results:** The results showed that participants' life satisfaction was positively correlated with healthy lifestyle behaviors such as health responsibility, physical activity, nutrition, spiritual growth, interpersonal relationships, and stress management. However, no significant differences were found between healthy lifestyle behaviors and life satisfaction based on housing damage, loss of relatives, or difficulties in accessing post-earthquake needs. Nevertheless, it was found that participants who had access to their needs and received their rights postearthquake had higher life satisfaction scores. **Conclusion:** The study concludes that material and emotional losses have significant impacts on life satisfaction, but healthy lifestyle behaviors are relatively less affected by these circumstances. The findings highlight the need to develop strategies that enhance life satisfaction, particularly in the aftermath of disasters. In this context, future studies should examine long-term effects with larger sample groups

**ÖZET Amaç:** Bu çalışma, Ocak-Nisan 2024 tarihleri arasında Kahramanmaraş Umut Kent Konteyner Kenti sakinleri arasında yaşam doyumu ile sağlıklı yaşam biçimi davranışları arasındaki ilişkiyi araştırmıştır. **Gereç ve Yöntemler:** Bu tanımlayıcı kesitsel çalışmaya, 6 Şubat 2023 Kahramanmaraş Depreminden etkilenen ve geçici konteyner konutlarda yaşayan 353 yetişkin dâhil edilmiştir. Veriler, Kişisel Bilgi Formu, Sağlıklı Yaşam Biçimi Davranışları Ölçeği II ve Yaşam Memnuniyeti Ölçeği kullanılarak yüz yüze görüşmeler yoluyla toplanmıştır. Tanımlayıcı istatistikler, Pearson korelasyon analizi, t-testi, tek yönlü varyans analizi ve doğrusal regresyon analizleri uygulanmış olup,  $p < 0,05$  istatistiksel olarak anlamlı kabul edilmiştir. **Bulgular:** Katılımcıların yaşam doyumu ile sağlık sorumluluğu, fiziksel aktivite, beslenme, ruhsal gelişim, kişilerarası ilişkiler ve stres yönetimi gibi sağlıklı yaşam biçimi davranışları arasında pozitif bir ilişki bulunmuştur. Ancak, konut hasarı, yakın kaybı veya deprem sonrası ihtiyaçlara erişim güçlükleri ile sağlıklı yaşam biçimi davranışları ve yaşam doyumu arasında anlamlı bir fark bulunmamıştır. Bununla birlikte, ihtiyaçlarına erişebilen ve deprem sonrası haklarını alabilen katılımcıların yaşam doyumu puanlarının daha yüksek olduğu tespit edilmiştir. **Sonuç:** Çalışma, maddi ve duygusal kayıpların yaşam doyumu üzerinde önemli etkileri olduğunu, ancak sağlıklı yaşam biçimi davranışlarının bu durumlardan nispeten daha az etkilendiğini ortaya koymaktadır. Bulgular, özellikle afetler sonrasında yaşam doyumunu artıracak stratejilerin geliştirilmesi gerektiğini vurgulamaktadır. Bu bağlamda, gelecekteki çalışmaların daha geniş örneklem grupları ile uzun vadeli etkileri incelemesi önerilmektedir.

**Keywords:** Earthquake; healthy lifestyle behaviors; life satisfaction; temporary container housing

**Anahtar Kelimeler:** Deprem; sağlıklı yaşam biçimi davranışları; yaşam doyumu; geçici konteyner konutlar

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Earthquakes are among the most devastating natural disasters, causing damage to infrastructure, loss of life, and injuries. Secondary disasters such as fires, tsunamis, and landslides may also occur.<sup>1</sup> They can result in severe economic and social disruption.<sup>2</sup> Türkiye is globally classified as a high-risk earthquake zone.<sup>3</sup>

On February 6, 2023, two powerful earthquakes (Mw 7.7 and Mw 7.6) struck the Pazarcık and Elbistan districts of Kahramanmaraş. Another earthquake (Mw 6.4) followed on February 20 in Yayladağı, Hatay. These events caused massive destruction across 11 provinces, leading to over 48,000 deaths, extensive infrastructure damage, and widespread homelessness.<sup>4</sup>

The Kahramanmaraş-centered earthquake severely disrupted ecological balance and caused major physical, economic, and social losses.<sup>5</sup> In response, the Turkish government established temporary container settlements for displaced individuals. Residents in these settings have shown increased healthcare needs.<sup>6</sup> They also face challenges such as inadequate housing, heating, and communication, contributing to elevated stress, anxiety, and decreased life satisfaction.<sup>5</sup>

Many individuals report high levels of uncertainty intolerance and hopelessness, highlighting the urgent need for psychosocial support. These emotional burdens can weaken coping abilities, discourage healthcare utilization, and impair healthy behavior maintenance. Prolonged housing instability and lack of support can have long-term negative effects on mental health and lifestyle behaviors.<sup>7</sup>

Previous studies show that natural disasters, particularly earthquakes, significantly impact psychological well-being, increasing the risk of post-traumatic stress disorder, depression, and anxiety—especially in those living in unstable conditions.<sup>8,9</sup>

The World Health Organization defines health as a state of complete physical, mental, and social well-being.<sup>10</sup> Healthy lifestyle behaviors (HLB) are essential for achieving this state.<sup>11-13</sup> These include regular physical activity, balanced nutrition, stress management, social relationships, spiritual development, and personal health responsibility. However,

the influence of post-disaster conditions—such as life in container settlements—on the adoption and sustainability of HLB remains underexplored. These environments may restrict access to healthy food, physical activity, and psychosocial resources, thus disrupting individuals' ability to maintain health-promoting behaviors.

This study aims to examine the HBL and LS of individuals living in container settlements following the earthquake. Specifically, it seeks to understand the effects of temporary shelter conditions on individuals' health behaviors and LS and to identify necessary interventions to minimize these effects. The results of the study may contribute to the development of post-disaster rehabilitation and support programs and could serve as a model for other communities facing similar situations.

#### Research Questions:

- What are the levels of LS among individuals living in container settlements after the earthquake?
- What are the HLB of individuals living in container settlements after the earthquake?
- Is there a relationship between overall and sub-dimensions of HLB and LS?
- What are the effects of demographic factors (such as gender, age, education level) and earthquake-related factors (such as owning a home, being trapped in debris, losing a loved one) on individuals' HLB and LS?

## MATERIAL AND METHODS

### METHODS OF THE STUDY

This descriptive cross-sectional study aimed to assess healthy lifestyle behaviors (HLB) and life satisfaction (LS) among individuals living in container settlements after the earthquake.

### POPULATION AND SAMPLE OF THE STUDY

The study was conducted from January to April 2024 in the Kahramanmaraş Umut City Container Settlement, with a total population of 4,203 individuals aged 18 and above. Using a standard formula for known populations (95% CI), the minimum sample size was calculated as 353. Systematic sampling was

applied based on a complete resident list. The sampling interval ( $k = 4,203 \div 353 \approx 12$ ) was used to select every 12th individual, starting from a randomly chosen point (number 7).

#### Inclusion Criteria

Aged 18 and above, residing in the settlement after the February 6, 2023 earthquake, physically and mentally capable, and voluntarily participating.

#### Exclusion Criteria

Under 18, not directly affected by the earthquake, residing temporarily or as guests, unwilling to participate, or having physical/mental disabilities.

#### DATA COLLECTION

Data were collected through face-to-face interviews using three tools:

##### The Personal Information Form

Included demographics (age, marital status, education, occupation, income, etc.), health status (illness, BMI, habits), and pre-/post-earthquake living conditions.<sup>14,15</sup>

##### The Healthy Lifestyle Behaviors Scale II

Developed by Walker et al. and adapted to Turkish by Bahar et al.<sup>16,17</sup> The scale includes 52 items in 6 sub-dimensions, rated on a 4-point Likert scale (52-208 total score). Higher scores indicate more frequent engagement in HLB. Cronbach's alpha for the overall scale is 0.94; subscales range from 0.79-0.87.

##### The Satisfaction with Life Scale

Developed by Diener et al. and adapted to Turkish by Dağlı and Baysal.<sup>18</sup> It consists of 5 items scored on a 7-point Likert scale. Scores range from 5 to 35, with higher scores indicating greater LS. Categorized interpretations include: 31-35 (extremely satisfied), 5-9 (extremely dissatisfied). The scale has a Cronbach's alpha of 0.88.

##### Implementation of the Study

Following ethical and institutional approvals, data were collected one year after the earthquake via face-to-face interviews, each lasting 15-20 minutes, after obtaining participants' consent.

#### DATA ANALYSIS

Analyses were conducted using IBM SPSS Statistics for Windows, Version 26.0 (IBM Corp., Armonk, NY, USA). Demographic and earthquake-related variables were summarized; normality was assessed via skewness and kurtosis. Pearson correlation examined the relationship between HLB and LS, and simple linear regression assessed LS's impact on HLB. T-tests and ANOVA compared group means, with Bonferroni correction for post hoc analysis. Statistical significance was set at  $p < 0.05$ .

#### ETHICAL CONSIDERATIONS

Ethical approval was obtained from Hatay Mustafa Kemal University Ethics Committee (date: 12.10.2023, No: 07/19), with institutional permission from the Umut City Container Settlement District Governorship. Participants were informed about the study and provided written consent. The principles of confidentiality, non-maleficence, beneficence, and the Declaration of Helsinki were upheld.

## RESULTS

The study included 353 participants, 78.8% of whom were female and 77.3% were married. While the gender distribution of the target population was nearly equal, more women participated voluntarily. The mean age was 42.5 years (range: 18-90), and mean BMI was 27.4 (range: 16.2-51.8). Among participants, 34.3% had chronic illness and 51.8% used medication regularly. Additionally, 75.1% reported regular balanced diets, 51% exercised regularly, 25.5% smoked, and 0.3% consumed alcohol. Over half (55%) reported incomes lower than their expenses.

Before the earthquake, 58.6% were tenants and 41.4% were homeowners; 24.1% lost their homes, 63.7% reported damage, and 6.8% were trapped in rubble. Moreover, 56.7% lost relatives, 17.6% received psychological support, and 98% had no physical disability. Although 70% accessed basic needs post-earthquake, 75.4% reported difficulties.

Participants' total HLB scores ranged from 78 to 207, with a mean of  $150.6 \pm 26.5$ . Sub-dimension scores were: health responsibility  $27.5 \pm 5.8$ , physical

**TABLE 1:** Statistics of healthy lifestyle general behaviors and sub-dimensions with life satisfaction scores

Scale score	Minimum	Maximum	$\bar{X} \pm SD$	Skewness	Kurtosis
Health responsibility	9	36	27,5 $\pm$ 5,8	-0,936	0,256
Physical activity	8	32	14,6 $\pm$ 6,0	0,97	-0,101
Nutrition	11	36	24,3 $\pm$ 5,2	0,054	-0,74
Spiritual development	14	36	30,5 $\pm$ 4,7	-0,971	0,676
Interpersonal relationships	13	36	28,7 $\pm$ 6,1	-0,52	-0,8
Stress management	10	32	25,1 $\pm$ 4,9	-0,574	-0,182
General healthy lifestyle	78	207	150,6 $\pm$ 26,5	-0,31	-0,478
Life satisfaction	5	35	18,3 $\pm$ 6,9	0,032	-0,598

SD: Standard deviation

activity 14.6 $\pm$ 6.0, nutrition 24.3 $\pm$ 5.2, spiritual growth 30.5 $\pm$ 4.7, interpersonal relationships 28.7 $\pm$ 6.1, and stress management 25.1 $\pm$ 4.9. LS scores ranged from 5 to 35, averaging 18.3 $\pm$ 6.9. Skewness and kurtosis values were within  $\pm 1$ , confirming normal distribution (Table 1).

Pearson correlation analysis revealed a significant, fair correlation between overall HLB and LS scores ( $r=0.326$ ,  $p<0.01$ ). As LS increased, HLB scores also rose. Among sub-dimensions, the strongest correlation was between LS and spiritual growth ( $r=0.361$ ,  $p<0.01$ ), followed by health responsibility, interpersonal relationships, and nutrition (each  $r=0.280$ ,  $p<0.01$ ), and weaker correlations with physical activity ( $r=0.194$ ) and stress management ( $r=0.195$ ), all statistically significant ( $p<0.01$ ) (Table 2).

Simple linear regression showed that LS significantly predicted HLB ( $F(1,350)=41.56$ ,  $p<0.01$ ), explaining 10.6% of the variance. A one-unit increase in LS was associated with a 1.24-unit increase in HLB ( $B=1.240$ ,  $t=6.447$ ,  $p<0.01$ ) (Table 3).

**TABLE 2:** Correlation between general and sub-dimensions of healthy lifestyle behaviors and life satisfaction

Scale scores	Life satisfaction	
	r value	p value
Health responsibility	0.280**	0.001
Physical activity	0.194**	0.001
Nutrition	0.280**	0.001
Spiritual development	0.361**	0.001
Interpersonal relationships	0.280**	0.001
Stress management	0.195**	0.001
General healthy lifestyle	0.326**	0.001

\*\* $p<0.01$ 

Comparisons across demographic groups (Table 4) showed no significant differences in HLB or LS by gender, occupation, residence, chronic illness, or education. However, participants with income equal to or greater than expenses had higher LS scores.

Participants with regular balanced diets had significantly higher HLB and LS scores (HLB: 156.8 $\pm$ 24.6 vs. 131.9 $\pm$ 22.8; LS: 19.2 $\pm$ 6.8 vs. 15.7 $\pm$ 6.8;  $p<0.001$ ). Non-smokers had higher scores

**TABLE 3:** Simple linear regression for healthy lifestyle behaviors

Independent variables	B	Standard error	$\beta$	t value	p value
Constant	127.999	3.771		33.942	0.001
Life satisfaction	1.24	0.192	0.326	6.447	0.001
Model statistics	$F(1,350)=41.56$ ; $p<0.001$ $R=0.326$ ; $R^2=0.106$				

B: Unstandardized regression coefficient;  $\beta$ : Standardized regression coefficient; R: Correlation coefficient;  $R^2$ : Coefficient of determination.

**TABLE 4:** Comparison of healthy lifestyle behaviors and life satisfaction scores by groups

Group	n	Healthy lifestyle behaviors $\bar{X} \pm SD$	Life satisfaction $\bar{X} \pm SD$
<b>Gender</b>			
Female	278	151.9 $\pm$ 24.6	18.5 $\pm$ 6.7
Male	75	145.7 $\pm$ 32.3	17.8 $\pm$ 7.7
p value		p <sup>1</sup> =0.073	p <sup>1</sup> =0.413
<b>Occupation</b>			
Housewife	269	150.2 $\pm$ 25	18.5 $\pm$ 6.8
Other	82	151.7 $\pm$ 31	17.5 $\pm$ 7.2
p value		p <sup>1</sup> =0.662	p <sup>1</sup> =0.24
<b>Location before the earthquake</b>			
City	324	150.7 $\pm$ 26.2	18.2 $\pm$ 6.8
Town and village	27	148.8 $\pm$ 28.9	20.2 $\pm$ 8.1
p value		p <sup>1</sup> =0.711	p <sup>1</sup> =0.147
<b>Income</b>			
Income less than expenses	194	148.7 $\pm$ 26.8	17.3 $\pm$ 7.1
Income equal to or greater than expenses	159	152.9 $\pm$ 26	19.7 $\pm$ 6.5
p value		p <sup>1</sup> =0.145	p <sup>1</sup> =0.001*
<b>Smoking</b>			
No	263	152.3 $\pm$ 26.3	18.9 $\pm$ 6.7
Yes	90	145.7 $\pm$ 26.3	16.6 $\pm$ 7.4
p value		p <sup>1</sup> =0.043*	p <sup>1</sup> =0.006*
<b>Chronic illness</b>			
No	232	149.9 $\pm$ 26.2	18.7 $\pm$ 6.5
Yes	121	151.9 $\pm$ 26.9	17.6 $\pm$ 7.7
p value		p <sup>1</sup> =0.501	p <sup>1</sup> =0.144
<b>Regular medication use</b>			
No	170	152.7 $\pm$ 26.3	19.2 $\pm$ 6.3
Yes	183	148.6 $\pm$ 26.6	17.5 $\pm$ 7.4
p value		p <sup>1</sup> =0.148	p <sup>1</sup> =0.018*
<b>Regular medication use (if yes)</b>			
No	75	142 $\pm$ 26	16.5 $\pm$ 7
Yes	108	153.3 $\pm$ 26.1	18.2 $\pm$ 7.6
p value		p <sup>1</sup> =0.005*	p <sup>1</sup> =0.144
<b>Regular and balanced diet</b>			
No	88	131.9 $\pm$ 22.8	15.7 $\pm$ 6.8
Yes	265	156.8 $\pm$ 24.6	19.2 $\pm$ 6.8
p value		p <sup>1</sup> =0.000*	p <sup>1</sup> =0.000*
<b>Exercise/walking</b>			
No	173	142.7 $\pm$ 24.6	18.3 $\pm$ 7.4
Yes	180	158.2 $\pm$ 26	18.4 $\pm$ 6.4
p value		p <sup>1</sup> =0.000*	p <sup>1</sup> =0.822
<b>Education level</b>			
Illiterate <sup>1</sup>	63	153.1 $\pm$ 23.6	19.9 $\pm$ 6.7
Primary school <sup>2</sup>	121	150.5 $\pm$ 24.2	17.7 $\pm$ 6.9
Middle school <sup>3</sup>	65	146.7 $\pm$ 29.4	17.4 $\pm$ 7.8
High school <sup>4</sup>	66	147.9 $\pm$ 27.4	17.7 $\pm$ 6.2
University <sup>5</sup>	38	158.1 $\pm$ 29.8	20.4 $\pm$ 6.3
p value		p <sup>2</sup> =0.221	p <sup>2</sup> =0.044*
Difference			1,5>2,3,4

\*p<0.05; p<sup>1</sup>: Significance value of independent groups t-test; p<sup>2</sup>: Significance value of one-way analysis of variance (ANOVA); Difference: Bonferroni "post hoc" comparison result for the source of the significant difference found in the ANOVA; SD: Standard deviation

than smokers. Medication use was not associated with HLB, but non-users reported higher LS. A significant difference in HLB was found based on regular medication use (p=0.005), though no such difference was observed for LS.

In analyses of pre- and post-earthquake conditions (Table 5), homeownership status before the earthquake did not affect HLB, but homeowners had higher LS scores. Neither being trapped in rubble nor damage to property significantly affected HLB or LS, except that those not experiencing loss of relatives had higher LS. Individuals who successfully accessed needs and received institutional support had higher LS, but not higher HLB. Likewise, those whose homes were not destroyed had better LS outcomes. Overall, LS was more sensitive to post-earthquake material and emotional losses than HLB.

## DISCUSSION

This study investigated the relationship between healthy lifestyle behaviors (HLB) and life satisfaction (LS) among individuals living in container cities after the Kahramanmaraş-centered earthquake. While HLB scores remained moderate, LS was below average, suggesting LS was more affected by post-disaster conditions than HLB.

Income level significantly influenced LS, while gender, occupation, and education did not affect either LS or HLB. This emphasizes the role of economic security in overall well-being during crises. Earthquake-related factors such as being trapped under debris, losing loved ones, or housing damage had limited impact on HLB but significantly influenced LS. In particular, owning a home and accessing basic needs were associated with higher LS. These findings highlight the psychological importance of housing stability and access to resources in temporary shelters. Unmet rights and claims were also linked to lower LS, supporting prior evidence that adverse post-disaster conditions reduce LS.<sup>19</sup>

These results underscore the need for disaster interventions that go beyond physical health and incorporate economic and psychosocial support. Strengthening such support systems may improve LS in the long term.



**TABLE 5:** Comparison of healthy lifestyle behaviors and life satisfaction scores according to earthquake-related variables

Group	n	Healthy lifestyle behaviors $\bar{X} \pm SD$	Life satisfaction $\bar{X} \pm SD$
Was the house you lived in before the earthquake your own			
Homeowner	146	149.8 $\pm$ 26.6	19.8 $\pm$ 7.4
Tenant	207	151.2 $\pm$ 26.4	17.3 $\pm$ 6.4
p value		p <sup>1</sup> =0.621	p <sup>1</sup> =0.001*
Were you trapped under debris?			
No	329	151 $\pm$ 26.5	18.3 $\pm$ 6.9
Yes	24	145.8 $\pm$ 25.4	18.3 $\pm$ 6.8
p value		p <sup>1</sup> =0.357	p <sup>1</sup> =0.971
Did you lose any relatives in the earthquake?			
No	153	154.8 $\pm$ 25.9	20 $\pm$ 7
Yes	200	147.4 $\pm$ 26.5	17.1 $\pm$ 6.6
p value		p <sup>1</sup> =0.008*	p <sup>1</sup> =0.000*
Were your belongings damaged in the earthquake?			
No	107	151 $\pm$ 23.9	19.2 $\pm$ 6.9
Yes	246	150.4 $\pm$ 27.5	18 $\pm$ 6.9
p value		p <sup>1</sup> =0.853	p <sup>1</sup> =0.127
Were you able to meet your needs after the earthquake?			
No	106	149 $\pm$ 27.1	16.7 $\pm$ 7.4
Yes	247	151.3 $\pm$ 26.2	19.1 $\pm$ 6.6
p value		p <sup>1</sup> =0.464	p <sup>1</sup> =0.003*
Did you experience difficulty in meeting your needs after the earthquake?			
No	87	152.1 $\pm$ 27.2	20 $\pm$ 7.2
Yes	266	150.1 $\pm$ 26.2	17.8 $\pm$ 6.7
p value		p <sup>1</sup> =0.552	p <sup>1</sup> =0.01*
Were your rights and demands met after the earthquake?			
No	156	152.8 $\pm$ 27.2	16.8 $\pm$ 6.8
Yes	196	149 $\pm$ 25.8	19.6 $\pm$ 6.8
p value		p <sup>1</sup> =0.179	p <sup>1</sup> =0.000*
Did you receive psychological support after the earthquake?			
No	291	150.6 $\pm$ 26.7	18.6 $\pm$ 7
Yes	62	150.8 $\pm$ 25.3	17.1 $\pm$ 6.6
p value		p <sup>1</sup> =0.951	p <sup>1</sup> =0.134
Was the house you lived in destroyed in the earthquake?			
No	43	150 $\pm$ 29.4	21.1 $\pm$ 7
No, but damaged	225	152.1 $\pm$ 25.7	17.6 $\pm$ 6.5
Yes	85	147 $\pm$ 26.9	19 $\pm$ 7.7
p value		p <sup>2</sup> =0.319	p <sup>2</sup> =0.005*
Difference			1>2
Condition of the house			
No damage	20	152.6 $\pm$ 29.2	21.3 $\pm$ 6.3
Slightly damaged	58	148.6 $\pm$ 24.5	19 $\pm$ 6.7
Moderately damaged	64	148.9 $\pm$ 24.9	17.4 $\pm$ 7
Severely damaged	187	152.2 $\pm$ 27.5	18.2 $\pm$ 7
p value		p <sup>2</sup> =0.731	p <sup>2</sup> =0.139

\*p<0.05; p<sup>1</sup>: Independent samples t-test significance value; p<sup>2</sup>: One-way analysis of variance (ANOVA) significance value; Bonferroni "post hoc" comparison result for the source of significant difference in ANOVA; SD: Standard deviation

A significant yet fair correlation was found between LS and overall HLB. Sub-dimensions such as health responsibility, physical activity, nutrition, interpersonal relationships, stress management, and especially spiritual growth were positively associated with LS. The strongest association was observed for spiritual growth ( $r=0.361$ ,  $p<0.01$ ), suggesting that finding meaning and purpose contributes to better LS. These findings align with the broader literature supporting the role of HLB in improving LS.

The study by Duan et al. demonstrated the positive effects of healthy lifestyle behaviors (HLB) on quality of life and life satisfaction (LS).<sup>20</sup> However, these were conducted in general populations, not trauma-exposed groups. In contrast, our study focused on earthquake survivors, whose LS is impacted by issues such as depression, loneliness, and death anxiety.<sup>21</sup>

Protective factors such as resilience, social capital, equitable aid distribution, and effective coping strategies play key roles in promoting LS.<sup>22-25</sup> Additionally, HLB in trauma-exposed populations are influenced by spiritual health beliefs, access to rehabilitation, and perceived social support.<sup>26-28</sup> Thus, this study contributes uniquely to the literature by contextualizing the relationship between HLB and LS in a post-disaster setting.

McNaughton et al. demonstrated that physical activity and nutrition positively affect life satisfaction.<sup>29</sup> Similarly, Pender et al. emphasized the theoretical basis of HLB in promoting life satisfaction, which aligns with the current study's findings.<sup>30</sup>

Cultural context also plays a vital role. Urzúa et al. highlighted how cultural norms shape coping strategies and well-being.<sup>31</sup> While their study did not focus on trauma, it supports the idea that HLB and LS are influenced by culture. Our findings address this gap by exploring HLB and LS in a culturally specific post-disaster population. Similarly, Dökme Yağar and Yağar demonstrated the negative effects of stress on LS and supported the use of lifestyle-based interventions.<sup>32</sup> Our findings on the stress management dimension align with their results.

In sum, the study confirms that HLB—especially dimensions such as spiritual growth—can positively affect LS, even in the aftermath of trauma. These findings are consistent with theoretical and empirical literature and may guide future health promotion efforts in disaster contexts.

## LIMITATIONS

The study was conducted in a single center in a specific disaster zone, limiting generalizability. Voluntary participation resulted in gender imbalance (78.8% female), potentially influencing gender-related findings. Unequal subgroup distributions (e.g., rural/urban, trapped/not trapped) may have affected comparisons. The cross-sectional design limits causal interpretations, and self-reported data may be influenced by recall and social desirability bias.

## RECOMMENDATIONS FOR FUTURE RESEARCH

Future studies should include larger and more diverse samples across multiple regions and disaster types. Longitudinal and intervention-based designs are needed to assess causal links and long-term impacts. Qualitative research could explore the personal and cultural meanings of coping and health behaviors. Researchers should also consider socioeconomic status, cultural norms, and community dynamics as key factors shaping both HLB and LS.

## CONCLUSION

Based on the findings, psychological support and counseling services should be prioritized for individuals in post-disaster container settlements. Health education programs promoting HLB and community-based support networks must be strengthened. Interventions should be tailored to demographic characteristics and supported by long-term follow-up and evaluation mechanisms.

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### Conflict of Interest

*No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.*

### Authorship Contributions

**Idea/Concept:** Gülizar Kurt Ateş; **Design:** Emine Kır Biçer; **Control/Supervision:** Emine Kır Biçer; **Data Collection and/or Processing:** Gülizar Kurt Ateş; **Analysis and/or Interpretation:** Emine Kır Biçer, Gülizar Kurt Ateş; **Literature Review:** Emine Kır Biçer, Gülizar Kurt Ateş; **Writing the Article:** Gülizar Kurt Ateş, Emine Kır Biçer; **Critical Review:** Emine Kır Biçer; **References and Fundings:** Gülizar Kurt Ateş.

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