

ORIGINAL RESEARCH ORJİNAL ARAŞTIRMA

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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 derived from a master's thesis.

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 and deadly events on the list of natural disasters worldwide. The effects of earthquakes vary depending on the regions where they occur. Destructive impacts include damage to buildings and infrastructure, loss of life, and injuries. Secondary disasters such as fires, tsunamis, and landslides can also occur following earthquakes.¹ Earthquakes can also cause significant economic and social damage.² Türkiye is located in a geographical area classified as “high risk” for earthquakes globally.³

On February 6, 2023, at 04:17 and 13:24 local time in Türkiye, 2 earthquakes with magnitudes of Mw 7.7 (focal depth=8.6 km) and Mw 7.6 (focal depth=7 km) struck with epicenters in the Pazarcık and Elbistan districts of Kahramanmaraş. Additionally, on February 20, 2023, at 20:04 local time, an earthquake with a magnitude of Mw 6.4 occurred with its epicenter in Yayladağı, Hatay. These earthquakes caused massive destruction across 11 provinces. In terms of their magnitude and the area they affected, these earthquakes are unparalleled disasters in recent history. As a result of these earthquakes, more than 48,000 people lost their lives, over half a million buildings were damaged, communication and energy infrastructures were severely affected, and significant material losses occurred. Consequently, many people were left homeless due to the widespread devastation.⁴

The earthquake centered in Kahramanmaraş disrupted the ecological balance, leading to widespread loss of life and property, and caused significant physical, economic, and social losses in the settlements within the disaster zone.⁵ The Turkish government built temporary container homes to accommodate the large number of people made homeless by the earthquakes. Households residing in temporary accommodations demonstrated a higher tendency to seek medical care compared to those living in permanent housing.⁶ Individuals living in post-earthquake container settlements face various challenges, such as shortages of necessities, housing, heating, and communication issues.⁵ These circumstances can lead to high levels of stress, anxiety, and a decrease in life satisfaction (LS) among affected individuals.

Indeed, individuals living in these conditions often report high levels of intolerance of uncertainty and hopelessness, which further increases the need for psychosocial support. Such emotional states can undermine the maintenance of healthy behaviors by weakening coping skills and reducing healthcare-seeking behavior. In the long term, prolonged housing instability and lack of social support may negatively affect mental health and, consequently, hinder the adoption of health-promoting lifestyle behaviors.⁷

Several studies have shown that natural disasters, especially earthquakes, significantly affect individuals’ psychological well-being, leading to increased rates of post-traumatic stress disorder, depression, and anxiety psychological consequences can persist long after the disaster, particularly among those who have lost their homes or are living in unstable conditions.^{8,9}

The World Health Organization defines health not just as the absence of disease or illness, but as a state of complete physical, mental, and social well-being.¹⁰ Healthy lifestyle behaviors (HBL) are crucial for maintaining and enhancing well-being.¹¹⁻¹³ These behaviors encompass physical activity, balanced nutrition, stress management, interpersonal relationships, spiritual growth, and responsibility for one’s own health. However, there is a need for more research examining how post-disaster living conditions-such as residing in container settlements-affect the adoption and sustainability of these HBL. Such settings may limit opportunities for regular exercise, healthy nutrition, and access to psychosocial support, thereby hindering individuals’ ability to maintain health-promoting routines.

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 study is a descriptive cross-sectional study, which is a type of observational research. It was conducted to determine the current status of HBL and LS among individuals living in container settlements after the earthquake.

POPULATION AND SAMPLE OF THE STUDY

This study was carried out between January 2024 and April 2024. The study population was consist of 4,203 individuals aged 18 and above residing in the Kahramanmaraş Umut City Container Settlement. The sample size was determined using a standard formula for known populations, ensuring a 95% confidence interval, and calculated as a minimum of 353 participants. Systematic sampling was preferred due to the availability of a complete and ordered resident list, which facilitated a practical and unbiased selection process. The sampling interval (k) was determined by dividing the population size by the sample size ($4,203 \div 353 \approx 12$). The starting point was randomly selected between 1 and 12 using a random number generator, and number 7 was chosen. Beginning from this point, every 12th individual on the list was included in the sample (e.g., 7, 19, 31, 43, etc.) until the target sample size of 353 voluntary participants was reached.

Inclusion Criteria

The criteria for inclusion in the study are; individuals aged 18 and over who experienced the February 6,

2023 Kahramanmaraş earthquake, residing in the container settlement post-earthquake, voluntarily participating in the study, and physically and mentally suitable.

Exclusion Criteria

The exclusion criteria are; individuals under the age of 18, those who did not experience the earthquake or came from outside the city, those staying as guests in the container settlements, individuals unwilling to participate in the study, and with physical or psychological disabilities.

DATA COLLECTION

Data for the study were collected using a “Personal Information Form,” the “Healthy Lifestyle Behaviors Scale II” and the “The Satisfaction with Life Scale (SWLS)”. Information was collected using face-to-face interviews.

The Personal Information Form

The form includes sociodemographic data (age, marital status, education level, occupation, place of residence, monthly income, gender, height, weight, body mass index (BMI), presence of illness), habits (alcohol and smoking), and data related to pre- and post-earthquake life.^{14,15}

The Healthy Lifestyle Behaviors Scale II

The HBL Scale II, originally developed by Walker et al., was adapted to Turkish culture by Bahar et al., who also established its validity and reliability for use in Turkish populations.^{16,17} It consist of 52 items, distributed across 6 sub-dimensions: spiritual growth, health responsibility, physical activity, nutrition, interpersonal relationships, and stress management. Utilizing a 4-point Likert scale, the possible scores range from 52 to 208. Higher total scores indicate more frequent engagement in HBL, whereas lower scores suggest less engagement in such behaviors. The overall alpha reliability coefficient is 0.94, while the reliability coefficients for the sub-dimensions range from 0.79 to 0.87.¹⁷

The Satisfaction with Life Scale

The SWLS was used to assess the overall LS of participants. The original scale was developed by Diener

et al. and adapted into Turkish by Dağlı and Baysal. The Turkish version consists of 5 items rated on a 7-point Likert scale (1-Strongly Disagree, 7-Strongly Agree). Total scores range from 5 to 35, with higher scores indicating greater LS. A score between 31-35 reflects extremely satisfied, 26-30 satisfied, 21-25 slightly satisfied, 20 neutral, 15-19 slightly dissatisfied, 10-14 dissatisfied, and 5-9 extremely dissatisfied, as suggested in the original scale interpretation guidelines. The scale has demonstrated strong psychometric properties, including a Cronbach alpha coefficient of 0.88 and satisfactory construct validity.¹⁸

Implementation of the Study

Data were collected between January 2024 and April 2024 (1 year after the earthquake). After obtaining the necessary permissions, surveys and scales were administered through face-to-face interviews with the participants' consent. Each interview lasted approximately 15-20 minutes.

DATA ANALYSIS

The data in this study were analyzed using SPSS software (version 26). The distributions of demographic and earthquake-related variables were presented, and the normality of the data was verified using skewness and kurtosis values. The relationship between HLB and LS was assessed using Pearson correlation analysis, and the impact of LS on HBL was examined through simple linear regression analysis. Groups were compared based on categorical variables using t-tests and one-way analysis of variance. Significant differences were analyzed using the Bonferroni method. Statistical significance was set at $p < 0.05$.

ETHICAL CONSIDERATIONS

Ethical approval was obtained from the Hatay Mustafa Kemal University Ethics Committee (date: 12.10.2023, no: 07/19), and the necessary institutional permission was granted by the Kahramanmaraş Umut City Container Settlement District Governorship. Participants were informed about the study's purpose, duration, and methodology and provided written consent by signing an "Informed Consent Form". Anonymity and confidentiality principles were adhered to, and the study was conducted by the principles of non-maleficence and beneficence. This

study was conducted in accordance with the Declaration of Helsinki.

RESULTS

The study included 353 participants, of whom 78.8% were female and 77.3% were married. Although the gender distribution in the total target population ($n=4,203$) was nearly equal (50.5% female, 49.5% male), the proportion of female participants in the sample was higher. This may be attributed to the voluntary participation method, which may have encouraged greater engagement among women. The mean age of the participants was 42.5 years (range: 18-90), and the average BMI was 27.4 (range: 16.2-51.8). Among the participants, 34.3% had a chronic illness, and 51.8% used medication regularly. Additionally, 75.1% reported eating a balanced diet regularly, and 51% engaged in regular exercise. The smoking rate was 25.5%, while the alcohol consumption rate was 0.3%. Regarding income, 55% indicated that their income was less than their expenses.

Before the earthquake, 58.6% of the participants were tenants, and 41.4% were homeowners. 24.1% reported that their homes were destroyed in the earthquake, and 63.7% stated that their homes were damaged. 6.8% were trapped in the rubble, and 56.7% lost relatives. While 70% were successful in accessing needs after the earthquake, 75.4% experienced difficulties. 17.6% received psychological support, and 98% did not experience any physical disability.

The distribution of participants' scores on general HBL, sub-dimensions, and LS is presented in Table 1. The general healthy lifestyle scores range from 78 to 207, with an average of 150.6 ± 26.5 . The sub-dimension scores are as follows: health responsibility 27.5 ± 5.8 , physical activity 14.6 ± 6.0 , nutrition 24.3 ± 5.2 , spiritual growth 30.5 ± 4.7 , interpersonal relationships 28.7 ± 6.1 , and stress management 25.1 ± 4.9 . LS scale scores range from 5 to 35, with an average of 18.3 ± 6.9 . The skewness and kurtosis values falling within ± 1 indicate that the data are normally distributed.

The relationship between overall HLB, its sub-dimensions, and LS was examined using Pearson correlation coefficient analysis (Table 2). This method

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

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

requires continuous variables to show normal distribution. The study found a statistically significant positive, fair correlation between participants' overall LS scores and overall healthy lifestyle behavior scores ($r=0.326$, $p<0.01$). Healthy lifestyle behavior scores also increase as LS scores increase.

Furthermore, statistically significant and positive correlations of poor strength were observed between LS and several sub-dimensions of HBL, including health responsibility ($r=0.280$, $p<0.01$), physical activity ($r=0.194$, $p<0.01$), nutrition ($r=0.280$, $p<0.01$), interpersonal relationships

($r=0.280$, $p<0.01$), and stress management ($r=0.195$, $p<0.01$). Among the sub-dimensions, the strongest correlation was found between LS and spiritual growth, which demonstrated a fair level of association ($r=0.361$, $p<0.01$). These findings indicate that as LS increases, the scores for the sub-dimensions of HLB also increase.

The impact of participants' LS levels on HBL was examined using a simple linear regression model. The tested model was found to be significant ($F(1,350)=41.56$, $p<0.01$). LS levels explained 10.6% of the variance in healthy lifestyle behavior scores. LS was identified as a significant predictor of HBL ($B=1.240$, $t=6.447$, $p<0.01$) and was found to have a positive effect. A 1-unit increase in LS scores leads to a 1.24-unit increase in healthy lifestyle behavior scores (Table 3).

HBL and LS scores of participants based on their demographic characteristics are analyzed in Table 4. No significant differences were found in HBL and LS scores concerning factors such as gender, occupation, place of residence, presence of chronic illness, and education level. In terms of income level, participants with income equal to or greater than their expenses

TABLE 3: Simple linear regression for healthy lifestyle behaviors

Independent variables	B	Standard error	β	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	$F_{(1,350)}=41.56$; $p<0.001$ $R=0.326$; $R^2=0.106$				

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

Group	n	Healthy lifestyle behaviors $\bar{X} \pm SD$	Life satisfaction $\bar{X} \pm SD$
Gender			
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 ¹ =0.073	p ¹ =0.413
Occupation			
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 ¹ =0.662	p ¹ =0.24
Location before the earthquake			
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 ¹ =0.711	p ¹ =0.147
Income			
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 ¹ =0.145	p ¹ =0.001*
Smoking			
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 ¹ =0.043*	p ¹ =0.006*
Chronic illness			
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 ¹ =0.501	p ¹ =0.144
Regular medication use			
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 ¹ =0.148	p ¹ =0.018*
Regular medication use (if yes)			
No	75	142 $\pm$ 26	16.5 $\pm$ 7
Yes	108	153.3 $\pm$ 26.1	18.2 $\pm$ 7.6
p value		p ¹ =0.005*	p ¹ =0.144
Regular and balanced diet			
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 ¹ =0.000*	p ¹ =0.000*
Exercise/walking			
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 ¹ =0.000*	p ¹ =0.822
Education level			
Illiterate ¹	63	153.1 $\pm$ 23.6	19.9 $\pm$ 6.7
Primary school ²	121	150.5 $\pm$ 24.2	17.7 $\pm$ 6.9
Middle school ³	65	146.7 $\pm$ 29.4	17.4 $\pm$ 7.8
High school ⁴	66	147.9 $\pm$ 27.4	17.7 $\pm$ 6.2
University ⁵	38	158.1 $\pm$ 29.8	20.4 $\pm$ 6.3
p value		p ² =0.221	p ² =0.044*
Difference			1.5>2,3,4

-p<0.05; p¹: Significance value of independent groups t-test; p²: 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

had higher LS scores (The mean HLB score was 151.9 $\pm$ 24.6 for females and 145.7 $\pm$ 32.3 for males (p=0.073); the corresponding LS scores were 18.5 $\pm$ 6.7 and 17.8 $\pm$ 7.7 (p=0.413), respectively).

Non-smokers scored higher in both HBL and LS compared to smokers. While continuous medication use did not affect HBL (p=0.144), those not using medication scored higher in LS. A statistically significant difference was found in healthy lifestyle behavior scores based on regular medication use (p=0.005), whereas no such difference was observed in LS scores. Participants who maintained a regular and balanced diet had higher scores in both HBL and LS [(HLB; 156.8 $\pm$ 24.6 vs. 131.9 $\pm$ 22.8, p<0.001) and LS (19.2 $\pm$ 6.8 vs. 15.7 $\pm$ 6.8, p<0.001)]. Regarding education level, LS scores were higher among illiterate and university-educated participants compared to other education levels.

Analysis of participants' conditions before and after the earthquake revealed various findings regarding HBL and LS scores (Table 5). Regarding homeownership status, no significant difference was found in healthy lifestyle behavior scores between participants who were homeowners and those who were renters before the earthquake. However, homeowners had higher LS scores compared to renters. Factors such as being trapped in debris, property damage, and damage to the home did not create significant differences in either HBL or LS. There was no difference in HLB between those who experienced a loss of close ones and those who did not; however, those who did not experience a loss had higher LS scores.

When examining situations such as access to needs after the earthquake, experiencing difficulties during this process, and receiving responses to rights and claims, no significant differences were found in HBL. However, participants who were able to access their needs and received responses to their claims had higher LS scores. Additionally, those who reported that their homes were not completely destroyed had higher LS scores compared to those with damaged homes. These data suggest that LS of participants after the earthquake varies according to various material and emotional losses, but HBL are less affected by these situations.

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 ¹ =0.621	p ¹ =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 ¹ =0.357	p ¹ =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 ¹ =0.008*	p ¹ =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 ¹ =0.853	p ¹ =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 ¹ =0.464	p ¹ =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 ¹ =0.552	p ¹ =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 ¹ =0.179	p ¹ =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 ¹ =0.951	p ¹ =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 ² =0.319	p ² =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 ² =0.731	p ² =0.139

-p<0.05; p1: Independent samples t-test significance value; p2: One-way analysis of variance (ANOVA) significance value; ark: Bonferroni "post hoc" comparison result for the source of significant difference in ANOVA; SD: Standard deviation

DISCUSSION

This study provides an in-depth examination of the relationships between HBL and LS among individuals living in container cities following the Kahramanmaraş-centered earthquake, which impacted 11 cities in Türkiye. The findings contribute to our understanding of how demographic and socioeconomic factors influence both HBL and LS.

Firstly, while HBL remained at a generally moderate level, LS was found to be below average. This indicates that LS was more significantly affected by post-earthquake conditions, whereas HBL remained relatively more stable. The observed decline in participants' LS may be related to the psychological and material challenges experienced after the earthquake.

When examining sociodemographic factors, it was found that income level had a significant effect on LS; participants with better income status had higher LS scores, while other factors (such as gender, occupation, and education level) did not have a significant impact on either LS or HBL. These findings underscore the important role of economic security in LS and highlight the impact of such factors on individuals' overall well-being in crises.

The difficulties and losses experienced after the earthquake have had a more pronounced effect on participants' LS, while HBL appear to have been less affected by these conditions. Factors such as housing status, remaining in debris, loss of loved ones, property damage, access to needs, difficulties in accessing needs, and receiving responses to rights and claims do not have a significant impact on HLB. However, these factors have been found to have noticeable effects on LS. Specifically, owning a home and accessing needs have been found to positively affect LS (p<0.05). This finding suggests that meeting basic needs may enhance LS for individuals living in temporary shelters. Housing and access to needs contribute to organizing daily life and providing psychological comfort, which can positively influence LS. Additionally, factors such as receiving responses to rights and claims and housing destruction have also shown significant effects on LS. Situations where responses to rights and claims are not received can negatively impact individuals' quality of life and

satisfaction. The literature highlights that such adverse conditions experienced in post-disaster situations can reduce individuals' LS.¹⁹ These findings indicate that access to support systems in post-disaster contexts is a crucial factor influencing the LS of individuals living in temporary housing.

These findings indicate that post-earthquake LS significantly fluctuates based on the material and emotional losses individuals face, whereas HBL remain relatively stable. This situation underscores the necessity for post-disaster intervention and support programs to extend beyond mere physical health concerns, incorporating economic and psychological support elements as well. Strengthening economic and psychological support strategies is crucial for enhancing individuals' LS during long-term recovery processes.

This study examines the relationship between HLB and LS. The analyses reveal a positive, though fair, significant relationship between overall LS scores and overall healthy lifestyle behavior scores. This finding suggests that increasing LS may also enhance healthy lifestyle behavior scores and that HBL can positively influence LS.

Significant relationships were also found between LS and various sub-dimensions of HBL. Specifically, sub-dimensions including health responsibility, physical activity, spiritual growth, nutrition, interpersonal relationships, and stress management demonstrated poor but significant correlations with LS. These findings suggest that different dimensions of HBL may affect LS and contribute positively to it.

Notably, the spiritual growth sub-dimension showed the highest correlation with LS ($r=0.361$, $p<0.01$), indicating that spiritual development plays a crucial role in enhancing individuals' LS. Considering spiritual growth as a process of adding meaning and purpose to one's life, this finding underscores the potential of the spiritual dimension to increase LS. Additionally, the significant relationships of other dimensions, such as health responsibility and interpersonal relationships, with LS suggest that HBL generally have the potential to improve overall LS. These findings support the role of HLB in enhancing LS and highlight the effects of different dimensions

in this process. Specifically, it appears that certain dimensions, such as spiritual growth, have a more pronounced impact on increasing LS. This can contribute to a better understanding of the potential of HLB to improve LS.

Similarly, the literature provides supporting evidence for the relationship between HLB and LS. Duan et al. emphasized the positive effects of HLB on life quality among older adults and explained their potential role in enhancing LS.²⁰ These findings align with and support the results of this study. However, it is important to note that these studies were conducted in general populations and not specifically among individuals who have experienced trauma or disasters. In contrast, our study focuses on earthquake survivors—a population whose LS is often adversely affected by psychological issues such as depression, loneliness, and death anxiety.²¹ Yet, protective factors like resilience, social capital, perceived fairness in aid distribution, and effective coping strategies play critical roles in enhancing their LS.²²⁻²⁵ Furthermore, HBL in this group are shaped by complex dynamics, including spiritual health beliefs, access to rehabilitation, and perceived social support.²⁶⁻²⁸ Thus, this study contributes uniquely to the literature by demonstrating how HLB relates to LS within the context of trauma and disaster recovery.

A study conducted by McNaughton et al. examined the positive effects of physical activity and nutrition on LS, detailing the relationships between HLB and LS.²⁹ Similarly, current study observed positive effects of various dimensions of HLB's on LS. Pender et al. provided theoretical frameworks for HBL, explaining their potential to increase LS. In this context, the findings of our study also support the theoretical foundations of HBL.³⁰

Urzúa et al. evaluated the effects of cultural differences on LS and examined the relationship between HBL and LS in different cultural contexts.³¹ This study offers findings supporting the impact of HLBs on LS, despite cultural variations. However, while this research addresses cultural factors, it does not directly focus on trauma-exposed populations. Considering that trauma experiences are deeply shaped by cultural background, the interaction be-

tween culture and trauma becomes particularly relevant in understanding LS after disasters. Cultural norms influence coping styles, community support systems, and the interpretation of stress, all of which affect recovery and well-being. Therefore, integrating cultural perspectives is essential when interpreting the role of HLB in disaster contexts. In this respect, our study addresses an important gap by exploring HLB and LS among earthquake survivors in a specific cultural setting. Additionally, a study by Dökme Yağar and Yağar assessed the negative effects of stress on LS and supported the role of healthy lifestyle interventions in mitigating these adverse effects.³² In our study, the role of dimensions such as stress management in enhancing LS is consistent with this literature.

In conclusion, the findings of this study underscore the importance of the relationship between HLB and LS and present results that are consistent with the existing literature. They demonstrate that various dimensions of HBL play a significant role in increasing LS and how these relationships align with current literature. Future research may further elucidate these relationships, enhancing our understanding of the impact of HBL on life quality.

LIMITATIONS

This study has several limitations. Firstly, it was conducted in a single center within a specific earthquake-affected region, which may limit the generalizability of the findings to other populations or settings that have experienced different types or intensities of trauma. Secondly, the sample was based on voluntary participation, and a significant gender imbalance was observed-78.8% of the participants were female, whereas the target population includes approximately equal proportions of men and women. This may have influenced the results, particularly in relation to gender-specific experiences of trauma and health behaviors.

Additionally, there was an unequal distribution in the number of participants across certain subgroups-particularly between urban and rural residents prior to the earthquake, and between those who were and were not trapped under debris-which may have affected the robustness of subgroup comparisons and the interpretation of non-significant findings. The

cross-sectional design also limits causal interpretations between HBL and LS. Finally, self-reported measures may be subject to recall bias or social desirability bias, which should be considered when interpreting the results.

RECOMMENDATIONS FOR FUTURE RESEARCH

Future studies should aim to include more diverse and representative samples across multiple centers and disaster types to improve the generalizability of findings. Longitudinal and intervention-based research designs would be valuable to better understand causal relationships and the long-term impact of HBL on LS among trauma survivors. Moreover, qualitative approaches could be employed to gain in-depth insights into the cultural and personal meanings behind coping strategies and health behaviors in post-disaster contexts. Researchers are also encouraged to consider the role of intersecting variables such as socioeconomic status, cultural norms, and community support systems in shaping both lifestyle behaviors and psychological well-being.

CONCLUSION

Based on the research findings, it is essential to provide primary psychological support and counseling services to individuals living in container cities following the earthquake. Educational programs that promote HBL should be strengthened, and community support networks should be enhanced. Additionally, personalized support services should be provided considering individuals' demographic characteristics, and these processes should be supported by long-term follow-up and evaluation studies.

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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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