

Evaluation of Volunteer Motivations: Kahramanmaraş Centered Earthquakes

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Abstract

This study aims to evaluate the motivation of volunteers in Kahramanmaraş-centered earthquakes in Türkiye and to provide a framework for increasing the well-being of volunteers and the sustainability of volunteerism. This research is cross-sectional and descriptive. The study's participants were volunteers who were at least eighteen years old and who had participated in the February 6, 2023, earthquakes in Türkiye. Sociodemographic form and volunteer motivation inventory were used as data collection tools. 414 volunteers who freely engaged in the earthquake disaster completed the data gathering instruments, and agreed to participate in the study made it complete. This study assessed volunteer motivation, which is an important source of social capital during disasters, according to a number of criteria. One of the scale's sub-dimensions, reciprocity scores, was shown to have a statistically significant gender difference. People who had encountered a calamity scored lower than those who had not, according to this study. Volunteer motivation was found to be impacted by disaster training. The reciprocity score, one of the scale's sub-dimensions, was shown to be correlated with the people's income levels. Individuals with low income levels demonstrated lower reciprocity scores than those with medium income levels, according to the findings. As a result of this study's findings, initiatives designed to encourage volunteerism in times of disaster should take into consideration factors like gender, financial level, and prior experience with disasters. It is advised to carry out more research using a mixed method design in order to assess other factors influencing volunteer motivation.

Keywords: Disaster, Disaster Management, Earthquakes, Volunteer, Volunteer Motivation

1. INTRODUCTION

Volunteering is characterized as voluntary activities performed for the benefit of society or a group without any social interest relationship and any expectation of remuneration. Volunteering is considered one of the social activities carried out by societies with a focus on cooperation (Wilson, 2000; Ovcharova et al., 2022; Akel and Mohammad, 2019). Education, health, and disasters are among the areas where volunteerism is most needed (Nissen et al., 2023; Jaime et al., 2023). Since disasters affect the societies in which they occur in different ways (AFAD, 2014), it can be considered critical to support volunteer activities in minimizing the negative effects of disasters.

Disasters cause serious problems in maintaining social services, especially public services, and volunteering activities may be needed to combat these problems (Apel and Coenen, 2020).

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However, motivation is a crucial variable in sustaining these activities (Cvetković et al., 2018a; Salmani et al., 2019). Motivation is defined as the stimulation of behavior to achieve a goal (Hull, 1943). Motivation is defined as the situation that motivates an individual to achieve a goal (Kleinginna Jr and Kleinginna, 1981). Motivation is defined as the activation of an internal state that enables individuals to act in a certain direction and encourages them to perform a task (Güney, 2013). Since volunteer motivation aims to satisfy the needs or impulses of individuals, it has been stated that the sources of motivation of individuals for the same volunteer activity are different (Alfes et al., 2016). Factors such as career development, feeling of appreciation, feeling valuable, and having a protective understanding may affect people's willingness to volunteer in disasters (Çevik and Gürsel, 2015). Some studies in the literature have mentioned that personal development, experience, reducing people's suffering and philanthropy are effective on volunteer motivation (Hudnall, 2008; Cottrell, 2010; Haski-Leventhal and Bargal, 2008). In addition, Anderson et al. (2016) stated that volunteering experience impacts personal development. Determining the factors affecting volunteer motivation and carrying out studies in this direction is important for the continuity of volunteer action (Butt et al., 2017). In the literature, it has been seen that various studies have been conducted on volunteer motivation in non-governmental organizations (Erdurmazlı, 2018; Akiş, 2019; Erdoğan et al., 2020; Aslan and Tuncay, 2024), volunteer motivation in youth centers (V. Akbulut and B.A. Akbulut, 2024), volunteer motivation of women (Aydın and Gülerarslan Özdemir, 2024; Altun and Demirişler, 2023), volunteer motivation of university students (Artan et al., 2018; Gülbak and Ayyıldız, 2023) and volunteer motivation of teachers (Kundoğdu and Akbaş, 2022). In addition, although various studies have been conducted examining the motivations of volunteers who respond to disasters (Durmuş, 2022; Aydemir, 2021; Ayvazoğlu and Çekiç, 2022; Whittaker et al., 2015; Yumagulova et al., 2021), but it has been evaluated that volunteer studies for earthquake disasters in Türkiye are limited (Yükseler et al., 2023; Semerci et al., 2023). For this reason, it is considered important to determine the motivational factors that lead individuals to volunteer to support more individuals to volunteer in disasters based on the fact that Türkiye is an earthquake country (Göver, 2023). There is evidence in many studies in the literature that motivation affects volunteer participation in disasters or emergencies (Köçer and Aslan, 2023; Xue et al., 2024; Fekete and Rhein, 2024). From this point of view, it has been evaluated that researching volunteer motivation in participation in earthquake disasters is an important issue. Therefore, this study aimed to evaluate the factors affecting the motivation of volunteers who took part in the Kahramanmaraş-centered earthquakes in Türkiye in terms of various variables. In this context, an attempt was made to answer the question of what are the factors affecting the motivation of volunteers in disasters.

2. METHODS

2.1. Type of Study

This study was planned as cross-sectional, descriptive and correlational.

2.2. Population and Sample

The population of the study consisted of volunteer individuals over the age of 18 who took part in the earthquakes that occurred in Türkiye on February 6, 2023. In the study, the sampling calculation method for unknown populations (Baş, 2010) was used. According to the calculation, the minimum sample size was determined as 384 (95% confidence interval, 5% margin of error). This study was completed with 414 people who volunteered during the earthquake disaster.

2.3. Data Collection Tools

There are two components to the data collection instrument used in this study. The first is the information form that the researchers created, which asks about sociodemographic details including age, marital status, income, education, and title as well as whether or not they have

experienced a disaster before or have lost a relative in one. Second, Çevik and Gürsel (2015) modified the volunteer motivation inventory created by Esmond and Dunlop (2004) for Turkish culture. The volunteer motivation inventory consists of 43 items and 10 sub-dimensions (Values, Appreciation, Social Interaction, Reciprocity, Reactivity, Self-Esteem, Social, Career Development, Understanding and Protective). It is a 5-point Likert-type scale. Cronbach's Alpha values of the sub-dimensions vary between 0.45 and 0.78 (Çevik and Gürsel, 2015).

2.4. Data Collection

Online Google Forms were used to gather data for the study from July to September of 2023. The researchers' form was divided into three sections. The information regarding the goal of the study and getting consent was covered in the first section. The participants' sociodemographic data was the subject of questions in the second segment. The Volunteer Motivation Inventory questions were incorporated into the third segment in order to evaluate the motivation of the volunteers. Participants checked the "I want to volunteer" box in the first section to indicate that they wished to volunteer for the study after reading the informed consent statement and the study's goal. Answering the questions took an average of ten to fifteen minutes.

2.5. Data Analysis

Data analysis was done using the licensed SPSS (Statistical Package for Social Sciences) package application. In order to assess which tests to employ in the analysis and to look at the data distribution, both parametric and nonparametric criteria were explored. Two separate group comparisons were conducted using the Man-Whitney U test and the independent samples t test. The Kruskal-Wallis H test and Bonferroni multiple comparison tests were employed to identify the cause of the difference in comparisons involving more than two independent groups. The study's recognized significance level was $p < 0.05$. Summary statistics related to the general and subscale scores of the Volunteer Inventory were evaluated (Table 1). Skewness and kurtosis values were examined to evaluate the normality of the data. If these values were ± 2.0 (George and Mallery, 2010), the data was considered to be normally distributed. Therefore, parametric tests were used to analyze the data. If the number of data in the groups was small, non-parametric test was used. To test the reliability of the scale and subscale scores used in the study, Cronbach's alpha internal consistency test was performed. This value was determined by Cronbach (1951). Alpha coefficient is a weight standard change average found by dividing the sum of certain items in the scale to the general variance (Ercan and Kan, 2004). Cronbach Alpha coefficient was evaluated based on data between 0 and 1 (İslamoğlu and Alnıaçık, 2009). According to these data, the overall and sub-dimension scores of the Volunteer Inventory were found to be at an acceptable/high reliability level (Table 1).

Table 1. Statistics on Scale Scores

	Cronbach's Alpha	Number of items	Kolmogorov-Smirnov ^a			Skewness	Kurtosis	Mean	Standard Deviation
			Statistics	sd	p				
Values	0.90	5	0.12	414	0.01	-0.82	0.24	19.45	4.72
Appreciation	0.61	4	0.09	414	0.01	-0.32	-0.06	15.01	3.06
Social interaction	0.79	4	0.08	414	0.01	-0.44	-0.25	14.57	3.74
Reciprocity	0.69	2	0.15	414	0.01	-0.67	-0.20	7.66	2.10
Reactivity	0.83	4	0.11	414	0.01	-0.56	-0.21	15.10	3.75
Self-esteem	0.87	5	0.11	414	0.01	-0.68	0.07	18.92	4.63
Understanding	0.93	5	0.13	414	0.01	-0.79	0.11	15.59	3.97
Social	0.83	5	0.07	414	0.01	-0.12	-0.36	16.66	4.88
Career development	0.59	4	0.11	414	0.01	0.07	-0.26	13.35	3.51

Evaluation of Volunteer Motivations: Kahramanmaraş Centered Earthquakes

Protective	0.85	5	0.08	414	0.01	-0.33	-0.26	17.98	4.70
Volunteer inventory (Total)	0.98	43	0.06	414	0.01	-0.57	0.14	158.14	35.63

^aLilliefors Significance Correction

2.6. Ethical Consideration

Approval was received from Artvin Çoruh University Scientific Research and Publication Ethics Board to conduct the study (Approval No: E-18457941-050.99-87299- 04.04.2023). Permission was received from the relevant author via e-mail on 13.03.2023 to use the volunteer motivations inventory in the study. Additionally, participants were informed about the study and their consent was obtained.

3. RESULTS

Of the participants, 73.91% were women, 79.95% were middle-income earners, 69.81% were paramedics, 82.13% had never lost a loved one in a disaster, 64.49% had experienced a disaster directly, and 54.83% had never received disaster training (Table 2).

Table 2. Results on Socio-Demographic Characteristics

Variable	Group	n	%
Gender	Male	108	26.09
	Female	306	73.91
Socio-economic status	Low	73	17.63
	Middle	331	79.95
	High	10	2.42
Marital status	Single	402	97.10
	Married	12	2.90
Education level	Secondary Education	13	3.14
	Associate degree	304	73.43
	Bachelor's degree	97	23.43
Professional title	Academician	2	0.48
	EADM*	11	2.66
	Dialysis Technician	44	10.63
	Tradesmen	11	2.66
	Nurse	38	9.18
	Officer	3	0.72
	Teacher	5	1.21
	Paramedic	289	69.81
	Medical laboratory techniques	11	2.66
Loss of a relative in a disaster	Yes	74	17.87
	No	340	82.13
Direct experience of any disaster before	Yes	267	64.49
	No	147	35.51
Previous disaster training status	Yes	187	45.17
	No	227	54.83

*EADM: Emergency Aid and Disaster Management

In the study, it was determined that there was a significant difference between the reciprocity subscale score and gender ($p<0.05$) and that women's scores (7.79 ± 2.02) were higher than men's (7.28 ± 2.26) (Table 3).

Table 3. Comparison of Scale Scores by Gender

Scale/Sub-dimensions	Group	n	$\bar{X}\pm sd$	t	p
Values	Male	108	18.95 \pm 5.48	-1.27	0.21
	Female	306	19.62 \pm 4.42		
Appreciation	Male	108	14.60 \pm 3.37	-1.61	0.11
	Female	306	15.15 \pm 2.94		
Social interaction	Male	108	14.04 \pm 4.29	-1.74	0.08
	Female	306	14.76 \pm 3.52		
Reciprocity	Male	108	7.28 \pm 2.26	-2.21	0.03
	Female	306	7.79 \pm 2.02		
Reactivity	Male	108	14.92 \pm 4.40	-0.58	0.56
	Female	306	15.16 \pm 3.50		
Self-esteem	Male	108	18.30 \pm 5.46	-1.63	0.10
	Female	306	19.14 \pm 4.28		
Understanding	Male	108	15.45 \pm 4.54	-0.41	0.69
	Female	306	15.63 \pm 3.76		
Social	Male	108	16.50 \pm 5.64	-0.39	0.70
	Female	306	16.71 \pm 4.58		
Career development	Male	108	13.17 \pm 4.02	-0.63	0.53
	Female	306	13.42 \pm 3.31		
Protective	Male	108	17.56 \pm 5.27	-1.09	0.28
	Female	306	18.13 \pm 4.48		
Volunteer inventory (General)	Male	108	154.47 \pm 41.72	-1.25	0.21
	Female	306	159.44 \pm 33.19		

t: Independent sample t-test

It was determined that the scores of appreciation, one of the sub-dimensions of the scale, showed significant difference according to the direct experience of a disaster ($p<0.05$). In the analysis of average scores, it was determined that people who directly experienced a disaster (14.75 ± 3.12) had lower scores than those who did not (15.49 ± 2.91). It was determined that social interaction scores showed significant difference according to the direct experience of a disaster ($p<0.05$). In the analysis of average scores, it was determined that people who directly experienced a disaster (14.25 ± 3.95) had lower scores than those who did not (15.16 ± 3.27). It was determined that self-esteem scores showed significant difference according to the direct experience of a disaster ($p<0.05$). Considering the mean values, it was determined that people who directly experienced a disaster (18.56 ± 4.85) had lower scores than those who did not (19.57 ± 4.12). There is a significant difference between disaster experience and social score ($p<0.05$). Considering the mean values, it was determined that people who directly experienced a disaster (16.28 ± 4.92) had lower scores than those who did not (17.33 ± 4.74). In the analysis of average scores, it was determined that people who directly experienced a disaster (155.52 ± 36.83) had lower scores than those who did not (162.90 ± 32.91) (Table 4).

Table 4. Comparison of Scale Scores According to Participants' Direct Experience of Any Disaster

Scale/Sub-dimensions	Group	n	$\bar{X} \pm sd$	t	p
Values	Yes	267	19.34±4.94	-0.65	0.52
	No	147	19.65±4.32		
Appreciation	Yes	267	14.75±3.12	-2.38	0.02
	No	147	15.49±2.91		
Social interaction	Yes	267	14.25±3.95	-2.36	0.02
	No	147	15.16±3.27		
Reciprocity	Yes	267	7.54±2.19	-1.52	0.13
	No	147	7.87±1.91		
Reactivity	Yes	267	14.99±3.82	-0.76	0.45
	No	147	15.29±3.62		
Self-esteem	Yes	267	18.56±4.85	-2.13	0.03
	No	147	19.57±4.12		
Understanding	Yes	267	15.35±4.18	-1.63	0.10
	No	147	16.01±3.53		
Social	Yes	267	16.28±4.92	-2.10	0.04
	No	147	17.33±4.74		
Career development	Yes	267	12.98±3.51	-2.94	0.01
	No	147	14.03±3.42		
Protective	Yes	267	17.67±4.88	-1.78	0.08
	No	147	18.53±4.31		
Volunteer inventory (General)	Yes	267	155.52±36.83	-2.02	0.04
	No	147	162.90±32.91		

t: Independent sample t-test

Table 5. Comparing Scale Scores According to Disaster Training Received

Scale/Sub-dimensions	Group	n	$\bar{X} \pm sd$	t	p
Values	Yes	187	20.12±4.49	2.63	0.01
	No	227	18.90±4.85		
Appreciation	Yes	187	15.41±2.94	2.44	0.02
	No	227	14.68±3.13		
Social interaction	Yes	187	14.94±3.79	1.79	0.07
	No	227	14.28±3.68		
Reciprocity	Yes	187	7.90±2.04	2.16	0.03
	No	227	7.46±2.13		
Reactivity	Yes	187	15.55±3.53	2.25	0.03
	No	227	14.72±3.89		
Self-esteem	Yes	187	19.64±4.34	2.91	0.01
	No	227	18.33±4.77		
Understanding	Yes	187	16.07±3.81	2.28	0.02
	No	227	15.19±4.06		
Social	Yes	187	17.01±4.82	1.32	0.19
	No	227	16.37±4.91		
Career development	Yes	187	13.57±3.53	1.14	0.25
	No	227	13.17±3.49		
Protective	Yes	187	18.64±4.64	2.63	0.01
	No	227	17.43±4.68		

Volunteer inventory (General)	Yes	187	162.83±34.24	2.45	0.01
	No	227	154.28±36.35		

t: Independent sample *t*-test

It was determined that there was a significant difference between the reciprocity score, which is one of the sub-dimensions of the scale, and the income level, and that the scores of individuals with low income levels were lower than those with middle income levels (Table 6).

Table 6. Comparison of Scale Scores by Income Level

Scale/Sub-dimensions	Group	n	Rank mean	X ²	sd	p	Difference					
Values	Low ¹	73	180.52	4.95	2.00	0.08	1<2					
	Medium ²	331	212.57									
	High ³	10	236.70									
Appreciation	Low ¹	73	197.94	0.75	2.00	0.69		1<2				
	Medium ²	331	209.08									
	High ³	10	225.15									
Social interaction	Low ¹	73	187.81	2.45	2.00	0.29			1<2			
	Medium ²	331	211.89									
	High ³	10	206.00									
Reciprocity	Low ¹	73	175.48	6.81	2.00	0.03				1<2		
	Medium ²	331	214.87									
	High ³	10	197.40									
Reactivity	Low ¹	73	190.64	2.08	2.00	0.35					1<2	
	Medium ²	331	210.50									
	High ³	10	231.35									
Self-esteem	Low ¹	73	188.33	2.58	2.00	0.28						1<2
	Medium ²	331	211.01									
	High ³	10	231.40									
Understanding	Low ¹	73	184.70	3.38	2.00	0.18	1<2					
	Medium ²	331	212.05									
	High ³	10	223.45									
Social	Low ¹	73	178.01	5.42	2.00	0.07		1<2				
	Medium ²	331	213.73									
	High ³	10	216.55									
Career development	Low ¹	73	181.03	4.88	2.00	0.09			1<2			
	Medium ²	331	212.37									
	High ³	10	239.40									
Protective	Low ¹	73	188.32	2.52	2.00	0.28				1<2		
	Medium ²	331	211.08									
	High ³	10	229.05									
Volunteer inventory (General)	Low ¹	73	182.15	4.14	2.00	0.13					1<2	
	Medium ²	331	212.47									
	High ³	10	227.95									

X²: Kruskal Wallis-H test

4. DISCUSSION

In this study, the motivation of volunteers, which is a crucial source of social capital in disasters, was evaluated in terms of several variables. It was found that reciprocity scores, one of the sub-dimensions of the scale, showed a statistically significant difference according to gender. In terms

of mean scores, it was found that women had higher scores than men. In the study conducted by Martins et al. (2024), it was found that male volunteers had higher average scores than female volunteers. In the study conducted by Ayvazoğlu and Çekiç (2022), it was found that the scores of reciprocity, understanding, social interaction, values, and self-esteem were significantly in favor of women in terms of gender. In the study conducted by Dağlı Ekmekçi and Işık İnan (2020), it was found that the creativity, ambition, and self-confidence scores of individuals who participated in volunteer activities were statistically significant according to gender, and the mean scores of men were higher than those of women. In the study conducted by Kulik et al. (2016), it was mentioned that social solidarity is the strongest motivational tool in volunteering for both women and men. In the study conducted by Ma et al. (2021), it was mentioned that women volunteered more in disaster preparedness activities than men. In his study, Akiş (2019) found significant results in favor of women in terms of self-esteem and understanding scores. In their study, Kundoğdu and Akbaş (2022) found significant results in favor of men in terms of value subscale score. Rueckert et al. (2011) found that the gender factor may be effective in sensory response or self-report. Ekşi et al. (2022) reported in their study that women will affect community resilience in disasters. Barsbuğa (2016) stated in his study that the gender factor does not affect volunteer motivation. In the studies that examined the effect of the gender factor on volunteering in the literature (Christiansen and Palkovitz, 2001; Cvetković et al., 2018b; Qureshi et al., 2005; Vaillancourt and Payette, 1986), it was mentioned that gender roles, future goals of individuals, etc. affect volunteering in terms of different variables. It has been evaluated that the gender factor is important in volunteering in disasters. It is thought that it is important to create gender-specific content in the preparation of disaster education programs.

This study found that people who had experienced a disaster had lower scores than those who had not. In the study conducted by Kalish (2014), it was found that in states that experienced natural disasters, there was a significant increase in volunteerism in the year following the disaster. In the study conducted by Aydemir (2021), it was stated that the number of volunteer individuals increased after the Marmara earthquake. Beyerlein and Sikkink (2008) reported that people affected by disasters are more likely to volunteer. Kragt and Holtrop (2019) reported that different experiences are interrelated and affect volunteering. Jaime et al. (2023) reported that volunteering experience and skills are statistically significant determinants for each of the volunteering tasks. Miller (2020) reported that volunteer motivation in disaster response is related to need, perceived urgency, and green space. It has been evaluated that the experience of disaster positively affects the willingness to volunteer in disasters. It can be considered that experience is effective on volunteer motivation.

In this study, it was determined that disaster training affects volunteer motivation. Ghodsi et al. (2022) mentioned in their study that disaster experience and disaster education affect volunteer resilience. Ma et al. (2021), it was stated that one of the factors affecting volunteer participation in disaster preparedness is training. Kuntjoro et al. (2019), it was stated that experience and training affect the motivation to volunteer in disaster management processes. Köçer and Aslan (2023), it was stated that previous disaster experience affects volunteering in disasters. Yükseler et al. (2023), it was mentioned that past experiences affect volunteering activities. It has been evaluated that one of the important factors affecting volunteer motivation in disasters is disaster education. It is thought that it is important to create disaster awareness training programs to ensure greater participation or increase the motivation of volunteer individuals in disaster organizations.

In this study, it was determined that the reciprocity score, which is one of the sub-dimensions of the scale, was related to the income level of the individuals. It was determined that the reciprocity scores of individuals with low-income levels were lower than those of individuals with medium-income levels. There may be a relationship between income level and willingness to volunteer in disasters (Veal and Nichols, 2017; Cui et al., 2018). Similarly, some studies in the literature have

mentioned that there may be a relationship between people's household income level and disaster preparedness and willingness (Annis et al., 2016; Cvetković, 2016; Naoi et al., 2012). Therefore, it can be inferred that education and income levels affect people's disaster preparedness and willingness to volunteer in disasters.

5. LIMITATION AND RECOMENDATION

There are some limitations to this study. First of all, cultural differences on motivation were not examined, which is an important limitation of the study. In addition, the earthquake may have affected the emotional states of the participants, which may have been reflected in the participant responses in a biased manner. Since the study was conducted using only a quantitative design, it is recommended that mixed-design studies be conducted in the future to examine the factors affecting volunteer motivation more comprehensively along with their reasons.

6. CONCLUSION

This study includes some important conclusions that may affect volunteer motivation in disasters. It was found that women have higher scores than men in terms of average scores. The fact that women have higher scores than men may support policies that ensure more effective participation of women in disaster management processes. It is recommended that these issues be taken into consideration when preparing disaster plans. It was found that people who experienced a disaster have lower scores than those who did not experience a disaster. The traumatic effects experienced may have an effect on the lower motivation scores of people who experienced a disaster compared to those who did not experience a disaster. For this reason, it is recommended that post-disaster psychosocial support services be sustainable and that motivation-enhancing actions be increased. It was determined that disaster training affects volunteer motivation. Considering the effect of disaster training on volunteer motivation, it is recommended that disaster training be organized in a sustainable way that reaches every individual. It was determined that low-income individuals have lower reciprocity scores than middle-income individuals. Economic concerns may affect volunteer motivation. Therefore, it is important to encourage mechanisms that increase the income level of individuals.

REFERENCES

- AFAD (2014). Açıklamalı afet yönetimi terimleri sözlüğü. On January 10, 2024 <https://www.afad.gov.tr/aciklamali-afet-yonetimi-terimleri-sozlugu> retrieved from.
- Akbulut, V., & Akbulut, B. A. (2024). Motivasyonel faktörlerin psikolojik iyi oluş ve yaşam memnuniyetine etkisi: Gönüllü gençler örneği. *Mediterranean Journal of Sport Science*, 7(3), 585-603. <https://doi.org/10.38021/asbid.1528599>
- Akel, M., & Mohammad, O. (2019). The culture of volunteerism and the role of social media in its development. *International Journal of Information Systems and Social Change (IJISSC)*, 10(3), 14-23. <https://doi.org/10.4018/IJISSC.2019070102>
- Akiş, M. S. (2019). Sivil Toplum Kuruluşlarında (STK) gönüllü motivasyon kaynaklarının sosyodemografik değişkenler açısından incelenmesi. *Marmara Sosyal Araştırmalar Dergisi*, 15, 40-61.
- Alfes, K., Shantz, A., & Bailey, C. (2016). Enhancing volunteer engagement to achieve desirable outcomes: What can non-profit employers do?. *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, 27, 595-617. <https://doi.org/10.1007/s11266-015-9601-3>

- Altun, F., & Demirişler, P. (2023). Kadın derneklerinde gönüllü faaliyetlerde bulunan kadınların gönüllülük motivasyonları ve deneyimleri üzerine bir değerlendirme. *Sosyal Çalışma Dergisi*, 7(2), 142-166.
- Anderson, D., Prioleau, P., Taku, K., Naruse, Y., Sekine, H., Maeda, M., ... & Yanagisawa, R. (2016). Post-traumatic stress and growth among medical student volunteers after the March 2011 disaster in Fukushima, Japan: Implications for student involvement with future disasters. *Psychiatric Quarterly*, 87, 241-251. <https://doi.org/10.1007/s11126-015-9381-3>
- Annis, H., Jacoby, I., & DeMers, G. (2016). Disaster preparedness among active duty personnel, retirees, veterans, and dependents. *Prehospital and Disaster Medicine*, 31(2), 132-140. <https://doi.org/10.1017/S1049023X16000157>
- Apel, D., & Coenen, M. (2020). Motivational and educational starting points to enhance mental and physical health in volunteer psycho-social support providers after the 2013 flood disaster in Germany. *International Journal of Disaster Risk Reduction*, 43, 101359. <https://doi.org/10.1016/j.ijdrr.2019.101359>
- Artan, T., Taşçı, A., & Başçılar, M. (2018). Üniversite öğrencilerinin gönüllü olma motivasyonları ile özgecilik düzeyleri arasındaki ilişki. *Journal of Social and Humanities Sciences Research*, 5(26), 2483-2493. <https://doi.org/10.26450/jshsr.656>
- Aslan, H., & Tuncay, T. (2024). Çocuk refahı alanında gönüllü faaliyetlere katılım sağlayan bireylerin gönüllülüğe bakışlarının incelenmesi. *İstanbul Üniversitesi Sosyoloji Dergisi*, 44(1), 283-311. <https://doi.org/10.26650/SJ.2022.44.1.0018>
- Aydemir, A. (2021). Afet yönetim sisteminin incelenmesinde gönüllülük hizmetleri ve bazı sivil toplum kuruluşları. *Afet ve Risk Dergisi*, 4(2), 387-394. <https://doi.org/10.35341/afet.986933>
- Aydın, M., & Gülerarslan Özdemir, A. (2024). Kadın yaşam doyumu: Erdemli davranışların katkısı. *Anadolu Üniversitesi Sosyal Bilimler Dergisi*, 24(3), 1035-1050. <https://doi.org/10.18037/ausbd.1478652>
- Ayvazoglu, G., & Çekiç, M. (2022). Hatay AFAD gönüllülerinin sosyo demografik bilgileri ve motivasyon analizi. *Toplum Bilimleri Dergisi*, (30), 122-139. <https://doi.org/10.29228/tbd.2007.50597>
- Barsbuğa, Y. (2016). Evaluation of motivation among individuals voluntarily assigned in recreative activities. The 2nd International Conference on the Changing World and Social Research (ICWSR) October, 14 - 16, 2016, Barcelona-SPAIN
- Baş, T. (2010). Anket (Nasıl hazırlanır, uygulanır değerlendirilir?), 6. Baskı. Ankara: Seçkin Yayıncılık.
- Beyerlein, K., & Sikkink, D. (2008). Sorrow and solidarity: Why Americans volunteered for 9/11 relief efforts. *Social Problems*, 55(2), 190-215. <https://doi.org/10.1525/sp.2008.55.2.190>
- Butt, M. U., Hou, Y., Soomro, K. A., & Acquadro Maran, D. (2017). The ABCE model of volunteer motivation. *Journal Of Social Service Research*, 43(5), 593-608 <https://doi.org/10.1080/01488376.2017.1355867>
- Christiansen, S. L., & Palkovitz, R. (2001). Why the "good provider" role still matters: Providing as a form of paternal involvement. *Journal of Family Issues*, 22(1), 84-106. <https://doi.org/10.1177/019251301022001004>
- Cottrell, A. (2010). Research Report: A survey of spontaneous volunteers. Report. Australian Red Cross.
- Cronbach, L. J. (1951). Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3), 297-334. <https://doi.org/10.1007/BF02310555>
- Cui, K., Han, Z., & Wang, D. (2018). Resilience of an earthquake-stricken rural community in southwest China: Correlation with disaster risk reduction efforts. *International Journal of Environmental Research and Public Health*, 15(3), 407. <https://doi.org/10.3390/ijerph15030407>

Cvetković, V. (2016). Influence of income level on citizen preparedness for response to natural disasters. *Vojno Delo*, 68(4), 100-127. <https://doi.org/10.5937/vojdelo1604100C>

Cvetković, V. M., Milašinović, S., & Lazić, Ž. (2018a). Examination of citizens' attitudes towards providing support to vulnerable people and volunteering during disasters. *Themes: Journal for Social Research*, 42(1), 35-56.

Cvetković, V. M., Roder, G., Öcal, A., Tarolli, P., & Dragičević, S. (2018b). The role of gender in preparedness and response behaviors towards flood risk in Serbia. *International Journal of Environmental Research and Public Health*, 15(12), 2761. <https://doi.org/10.3390/ijerph15122761>

Çevik, A., & Gürsel, F. (2015). Gönüllü motivasyon envanteri: Türk popülasyonuna uyarlanması. *Spormetre Beden Eğitimi ve Spor Bilimleri Dergisi*, 13(2), 83-92. https://doi.org/10.1501/Sporm_00000000272

Dağlı Ekmekçi, Y. A., & Işık İnan, Ö. (2020). Gönüllülük faaliyetinde bulunan üniversite öğrencilerinin girişimcilik özellikleri, Üçüncü Sektör Sosyal Ekonomi Dergisi, 55(1), 246-267 <https://doi.org/10.15659/3.sektor-sosyal-ekonomi.20.02.1257>

Durmuş, N. (2022). Acil yardım ve afet yönetimi sisteminde gönüllülük çalışmaları: Örnek bir proje "gonulluol.org". *Acil Yardım ve Afet Bilimi Dergisi*, 2(2), 25-27.

Ekşi A, Utanır Altay S., & Gümüşsoy S. (2022). The role of female volunteers in disaster response organisations: A qualitative research. *Work*. 73(4):1421-1431. <https://doi.org/10.3233/WOR-210666>

Ercan, İ., & Kan, İ. (2004). Ölçeklerde güvenirlik ve geçerlik. *Uludağ Üniversitesi Tıp Fakültesi Dergisi*, 30(3), 211-216.

Erdoğan, N., Bircan, H. M., Sayın, Z., & Aydemir, Ö. F. (2020). Genç gönüllülerin motivasyonu - STK'larda devamlılığı sağlayan faktörler. *İstanbul: İLKE İlim Kültür Eğitim Vakfı*. <https://doi.org/10.26414/ky0002>

Erdurmazlı, E. (2018). Gönüllülerin motivasyon ve iş tatminleri üzerine bir araştırma: Örgüt kültürünün aracılık etkisinin incelenmesi. *Journal of Management and Economics Research*, 16(2), 71-90. <https://doi.org/10.11611/yead.389674>

Esmond, J., & Dunlop, P. (2004). Developing the volunteer motivation inventory to assess the underlying motivational drives of volunteers in Western Australia.

Fekete, A., & Rhein, B. (2024). More Help Was Offered—But Was It Effective? First Responders and Volunteers in the 2021 Flood Disaster in Germany. *Geosciences*, 14(2), 46. <https://doi.org/10.3390/geosciences14020046>

George, D., & Mallery, M. (2010). *SPSS for Windows Step by Step: A Simple Guide and Reference*, 17.0 Update (10a ed.) Boston: Pearson

Ghods, H., Sohrabzadeh, S., Jazani, R. K., & Kavousi, A. (2022). Factors affecting resiliency among volunteers in disasters: A systematic literature review. *Disaster Medicine and Public Health Preparedness*, 16(1), 398-404. <https://doi.org/10.30855/gjes.2022.08.03.004>

Göver, İ. H. (2023). Türkiye ve Japonya'nın deprem gerçekliği: Karşılaştırmalı bir analiz. *Mevzu-Sosyal Bilimler Dergisi*, 10, 279-323. <https://doi.org/10.56720/mevzu.1319896>

Gülbak, O., & Ayyıldız, E. (2023). Gönüllülük çalışmaları kapsamında insan doğasını sorgulamak: Farkındalık topluluğu örneği. *İstanbul Ticaret Üniversitesi Sosyal Bilimler Dergisi*, 22(46), 97-114. <https://doi.org/10.46928/iticusbe.1162684>

Güney, S. (2013). *Davranış bilimleri*. Ankara: Nobel Akademik Yayıncılık.

Haski-Leventhal, D., & Bargal, D. (2008). The volunteer stages and transitions model: Organizational socialization of volunteers. *Human Relations*, 61(1), 67-102. <https://doi.org/10.1177/0018726707085946>

Hudnall, E. (2008). Creating the need to serve: How west virginia spontaneous disaster relief volunteers' motivations and experiences influence their willingness for continued volunteerism. Graduate Theses, Dissertations, and Problem Reports. 5833. <https://researchrepository.wvu.edu/etd/5833>

Hull, C. L. (1943). *Principles of behavior: an introduction to behavior theory*. New York: Appleton-Century-Crofts.

İslamoğlu, A. H. & Alınacak, Ü. (2009). *Sosyal Bilimlerde Araştırma Yöntemleri*. İstanbul: Beta Basım Yayım.

Jaime, D., Martínez, P., Contreras, D., Bonacic, C., & Marín, M. (2023). Volunteers' capabilities and their perceived satisfaction and performance in volunteering tasks during socio-natural disasters. *International Journal of Disaster Risk Reduction*, 85, 1-11. 103510. <https://doi.org/10.1016/j.ijdr.2022.103510>

Kalish, A. P., (2014). The effect of natural disasters on volunteerism. CMC Senior Theses. Paper 916. http://scholarship.claremont.edu/cmc_theses/916

Kleinginna Jr, P. R., & Kleinginna, A. M. (1981). A categorized list of motivation definitions, with a suggestion for a consensual definition. *Motivation and Emotion*, 5(3), 263-291. <https://doi.org/10.1007/BF00993889>

Köçer, M. S., & Aslan, R. (2023). Gönüllü arama kurtarma ekiplerinin orman yangınlarındaki tahliye deneyimleri: 2021 Akdeniz orman yangınları. *Afet ve Risk Dergisi*, 6(3), 829-851. <https://doi.org/10.35341/afet.1236021>

Kragt, D., & Holtrop, D. (2019). Volunteering research in Australia: A narrative review. *Australian Journal of Psychology*, 71(4), 342-360. <https://doi.org/10.1111/ajpy.12251>

Kulik, L., Bar, R., & Dolev, A. (2016). Gender differences in emergency volunteering. *Journal of Community Psychology*, 44(6), 695-713. <https://doi.org/10.1002/jcop.21795>

Kundoğlu, G., & Akbaş, O. (2022). Öğretmenlerin gönüllülük motivasyonlarının eğitim programı liderliği yeterlikleri bağlamında incelenmesi. *Gazi Eğitim Bilimleri Dergisi*, 8(3), 442-469. <https://doi.org/10.30855/gjes.2022.08.03.004>

Kuntjoro, I., Claramita, M., & Istiono, W. (2019). Evaluation of community based disaster preparedness training for UGM health study program students in 2016. *Review of Primary Care Practice and Education (Kajian Praktik dan Pendidikan Layanan Primer)*, 2(1), 15-19. <https://doi.org/10.22146/rpcpe.44469>

Ma, Y., Zhu, W., Zhang, H., Zhao, P., Wang, Y., & Zhang, Q. (2021). The factors affecting volunteers' willingness to participate in disaster preparedness. *International Journal of Environmental Research and Public Health*, 18(8), 4141. <https://doi.org/10.3390/ijerph18084141>

Martins, C., Da Silva, J. T., De Jesus, S. N., Ribeiro, C., Estêvão, M. D., Baptista, R., ... & Nunes, C. (2024). The Volunteer Functions Inventory (VFI): Adaptation and Psychometric Properties among a Portuguese Sample of Volunteers. *European Journal of Investigation in Health, Psychology and Education*, 14(4), 823-837. <https://doi.org/10.3390/ejihpe14040053>

Miller, S. (2020). Greenspace after a disaster: The need to close the gap with recovery for greater resilience. *Journal of the American Planning Association* 86 (3), 339-348. <https://doi.org/10.1080/01944363.2020.1730223>

Naoui, M., Seko, M., & Ishino, T. (2012). Earthquake risk in Japan: Consumers' risk mitigation responses after the Great East Japan earthquake. *Journal of Economic Issues*, 46(2), 519-530. <https://doi.org/10.2753/JEI0021-3624460227>

Nissen, S., Carlton, S., & Wong, J. H. (2023). Supporting volunteer well-being through disaster: Perspectives and practices of a youth-led informal crisis volunteer group. *Nonprofit and Voluntary Sector Quarterly*,

52(3), 704-722. <https://doi.org/10.1177/08997640221113882>

Ovcharova, V., Boiko, G., Kulyk, M., Butchenko, T. I., & Kupina, L. (2022). Volunteering as a technology for involving public activity and a factor of influence on the career strategies of youth. *Revista Eduweb*, 16(3), 294-312. <https://doi.org/10.46502/issn.1856-7576/2022.16.03.22>

Qureshi, K., Gershon, R. R., Sherman, M. F., Straub, T., Gebbie, E., McCollum, M., ... & Morse, S. S. (2005). Health care workers' ability and willingness to report to duty during catastrophic disasters. *Journal of Urban Health*, 82, 378-388. <https://doi.org/10.1093/jurban/jti086>

Rueckert, L., Branch, B., & Doan, T. (2011). Are gender differences in empathy due to differences in emotional reactivity?. *Psychology*, 2(6), 574-578. <https://doi.org/10.4236/psych.2011.26088>

Salmani, I., Seyedin, H., Ardalan, A., & Farajkhoda, T. (2019). Conceptual model of managing health care volunteers in disasters: A mixed method study. *BMC Health Services Research*, 19(1), 1-9. <https://doi.org/10.1186/s12913-019-4073-6>

Semerci, P. U., Durmuş, G., Turner, Z. T., Beyazova, A., & Bekmen, A. S. (2023). Deprem sonrası sahayı ve gönüllülüğü konuşmak. *REFLEKTİF Sosyal Bilimler Dergisi*, 4(2), 519-537. <https://doi.org/10.47613/reflektif.2023.120>

Vaillancourt, F., & Payette, M. (1986). The supply of volunteer work: The case of Canada. *Journal of Voluntary Action Research*, 15(4), 45-56. <https://doi.org/10.1177/089976408601500406>

Veal, A. J., & Nichols, G. (2017). Volunteering and income inequality: Cross-national relationships. *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, 28, 379-399. <https://doi.org/10.1007/s11266-016-9818-9>

Whittaker, J., McLennan, B., & Handmer, J. (2015). A review of informal volunteerism in emergencies and disasters: Definition, opportunities and challenges. *International Journal of Disaster Risk Reduction*, 13, 358-368. <https://doi.org/10.1016/j.ijdr.2015.07.010>

Wilson, J. (2000). Volunteering. *Annual Review of Sociology*, 26(1), 215-240. <https://doi.org/10.1146/annurev.soc.26.1.215>

Yumagulova, L., Phibbs, S., Kenney, C. M., Yellow Old Woman-Munro, D., Christianson, A. C., McGee, T. K., & Whitehair, R. (2021). The role of disaster volunteering in Indigenous communities. *Environmental Hazards*, 20(1), 45-62. <https://doi.org/10.1080/17477891.2019.1657791>

Yükseler, M., Yazgan, J., & Tenikler, G. (2023). Anlık gönüllülük olgusunun Türkiye'deki afet ve acil durum yönetimi açısından değerlendirilmesi. *Afyon Kocatepe Üniversitesi İktisadi ve İdari Bilimler Fakültesi Dergisi*, 26(1), 1-17. <https://doi.org/10.33707/akuiibfd.1311962>

Xue, P., Fei, L., & Ding, W. (2024). A volunteer allocation optimization model in response to major natural disasters based on improved Dempster-Shafer theory. *Expert Systems with Applications*, 236, 121285. <https://doi.org/10.1016/j.eswa.2023.121285>