

Original Research

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Abbreviations:

AFAD, Disaster and Emergency Management Presidency; ANOVA, Analysis of Variance; MHPSS, Mental Health and Psychosocial Support; SPSS, Statistical Product and Service Solutions; TAMP, Türkiye Disaster Response Plan

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Psychological Hardiness and Compassion Satisfaction Among the Turkish Red Crescent: The Case of 2023 Kahramanmaraş Earthquake

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Abstract

Objectives: This study assessed psychological hardiness and compassion satisfaction among the Türk Kızılay (Turkish Red Crescent) personnel and volunteers involved in the 2023 Kahramanmaraş earthquake. Additionally, the relationship between compassion satisfaction and psychological hardiness was also investigated.

Methods: This cross-sectional study was conducted between March and July 2023. Participants completed an online survey, which included the Sociodemographic Information Form, Psychological Hardiness Scale, and Compassion Satisfaction Scale. The data was analyzed with SPSS version 25 (IBM Corp., Armonk, New York, USA), using a significance level of 95% and $p < 0.05$.

Results: The study involved 400 participants, comprising 84 (21%) personnel and 316 (79%) volunteers. Participants exhibited an average psychological hardiness level of 24.56 ± 7.25 and a compassion satisfaction level of 47.40 ± 17.28 . A significant positive correlation was observed between compassion satisfaction and psychological hardiness ($r = 0.571$; $p < 0.001$). The results of logistics regression have revealed that the level of psychological hardiness is higher in males compared to females (OR = 1.930, CI = 1.115 – 3.340; $P < 0.05$) and is also higher in those with high compassion satisfaction compared to those with low compassion satisfaction (OR = 1.386, CI = 1.256 – 1.529; $p < 0.001$).

Conclusions: The findings of this study indicate that individuals involved in disaster response should consider compassion satisfaction as an important tool for enhancing psychological hardiness.

A 7.7 magnitude earthquake occurred in the Pazarcık district of Kahramanmaraş on February 6, 2023, followed by a second earthquake measuring 7.6 magnitude centered in Elbistan.¹ Since these 2 earthquakes, more than 30 000 aftershocks have occurred in the following months. The impact of the earthquakes, affecting approximately 108 000 square kilometers, was strongly felt in neighboring provinces such as Adana, and Adıyaman, as well as Diyarbakır, Elazığ, Gaziantep, and Hatay. Areas such as Kilis, Malatya, Osmaniye, and Şanlıurfa were also affected. These earthquakes, described by the government as the “Disaster of the Century,” were the most impactful earthquakes to occur in the country’s south-eastern region. On the same day, the Turkish government issued a Level 4 Alert, appealing for international assistance for search and rescue operations.² This catastrophic disaster has resulted in extensive damage to homes and infrastructure in both urban and rural areas. Approximately 16 million people have been affected by the disaster, with 9.1 million of them directly impacted. By April 11, the Disaster and Emergency Management Presidency of Türkiye (AFAD) reported that the earthquakes had resulted in the loss of more than 50 000 lives and 10s of thousands of people injured.³ Furthermore, AFAD indicated that over 216 000 people from the affected areas have been relocated to other provinces, while approximately 3 million people have been displaced as a result of the earthquakes.^{3,4}

Turkish Red Crescent (Türk Kızılay) plays a vital role in providing humanitarian aid to people affected by disasters as the main body for the National Nutrition Service Group, and as a subordinate member of the following service groups: Telecommunications; Health; Transportation; Shelter; Psychosocial Support; In-Kind Assistance Storage Management and Distribution; International Support and Relations; and National and International Cash Donation service groups under the framework of the Türkiye Disaster Response Plan (TAMP). Since the first day of the disaster, Türk Kızılay has been conducting relief operations in the 11 provinces affected. Thanks to its extensive experience and strengthened capacity-building efforts in localization, Türk Kızılay’s local response has been widely felt in many areas.⁴ Türk Kızılay has published 5 situation reports as follows: the Kahramanmaraş Earthquake Situation Report I on February 14, 2023, the Kahramanmaraş Earthquake



Figure 1. Situation Reports of the Türk Kızılay.

Situation Report II on February 22, 2023, the Türkiye Earthquakes' Situation Report III on March 7, 2023, and the Türkiye Earthquakes' Situation Report IV on April 4, 2023, as well as the Türkiye Earthquakes' Situation Report V – “Rising from the Debris: The Journey of Early Recovery” on June 1, 2023 (Figure 1). Working day and night to meet the urgent needs of the affected population, Türk Kızılay started early recovery activities months after the earthquake. Early recovery actions include livelihood support, psychosocial care, education, and health/protection services. Due to significant loss of life as well as ongoing aftershocks, and the profound impact of flood disasters on the community's mental health, Türk Kızılay's Mental Health and Psychosocial Support (MHPSS) teams, consisting of psychologists, social workers, and volunteers, have started providing psychosocial support.⁵

MHPSS teams visited the disaster area, conducted needs assessments, and provided psychosocial support services to victims based on their needs. To help individuals in tent cities maintain personal boundaries and prevent abuse, they organized educational activities such as privacy education, values education, and environmental cleanliness. Psychoeducation on trauma, post-traumatic stress responses, peer relationships, and emotion management was provided for adolescents. Emotional sharing sessions were also organized for adult men and women to discuss their experiences during the disaster. Additionally, activities such as fairy tale therapy workshops, kite, puzzle-making workshops, and knitting, as well as sewing, and embroidery workshops were introduced. Football, volleyball, chess tournaments, and cinema screenings/ music games were also organized.⁵

A disaster has significant traumatic effects not only on individuals but also on personnel working in disaster-affected areas. Responder teams often face notable psychological exhaustion and compassion fatigue in their professional environment due to their exposure to the suffering and trauma of disaster victims and their families. Therefore, Türk Kızılay's personnel and volunteers receive training on pre-disaster stress management, personal development, and related topics. The proactive training approach of the Türk Kızılay, emphasizing the importance of being prepared for such situations, became even more pronounced during the Kahramanmaraş earthquake. Personnel and volunteers actively participated in group therapy sessions and sought individual counseling services through Türk Kızılay's support teams and volunteer mental health professionals.

Previous research indicates that the symptoms following a traumatic event can be influenced by the intensity of the trauma,

prior traumatic experiences, as well as an individual's psychological hardiness, and resilience.^{6,7} Thus, providing humanitarian aid in extraordinary situations like earthquakes necessitates considerable psychological hardiness and resilience. The concepts of psychological hardiness and psychological resilience are sometimes used interchangeably since they are related, but they represent distinct structures. Psychological resilience refers to an individual's ability to cope mentally and emotionally with a crisis or to return to pre-crisis status quickly.⁸ Numerous factors influence a person's level of resilience, including personal characteristics such as self-esteem, self-regulation, a positive outlook on life, and external factors such as social support systems.⁹ Psychological hardiness, initially proposed by Kobasa in 1979, is a personality trait characterized by an individual's ability to effectively manage, and respond to stressful events through the use of appropriate coping strategies encompassing 3 components: commitment, control, and challenge.^{10,11} In summary, resilience refers to the ability to adapt to challenging situations, while hardiness is a personality trait that moderates how 1 deals with stressful factors. While both variables (resilience and hardiness) play a crucial role in determining responses to challenging living conditions during disaster interventions, hardiness has a greater impact on individuals' mental health compared to resilience.¹²

Additionally, compassion and compassion satisfaction concepts are also important factors in coping with challenges and stressors encountered in disasters, similar to psychological hardiness. Compassion involves feeling empathy and providing psychosocial support to those in need, and compassion satisfaction reflects an individual's positive emotions and a sense of fulfillment from helping others.^{13,14} There are studies in literature emphasizing the connection between compassion satisfaction and psychological hardiness.¹⁵ Developing environments that promote psychological hardiness in disaster situations and support compassion satisfaction is vital for achieving positive outcomes in a condition that may not always be conducive to these factors. Therefore, this study was conducted primarily to assess the levels of psychological hardiness and compassion satisfaction among Türk Kızılay's personnel and volunteers. Secondly, the aim was to investigate whether there is a significant relationship between compassion satisfaction and psychological hardiness. The findings obtained from this study will provide a valuable foundation for identifying ways to enhance the compassion of intervention teams and strengthen their psychological hardiness.

Methods

Study Design and Participants

This cross-sectional study was conducted between March and July 2023. The study population consisted of the Türk Kızılay's personnel and volunteers who were working in the disaster area during the earthquake. At the time the research was planned, there were 5000 volunteers and 1200 personnel providing service. The inclusion criteria for participation in the study were being a Türk Kızılay personnel or volunteer and being involved in earthquake relief efforts. The study sample was comprised using the simple random sampling method, and the minimum sample size has been determined as 382 using the formula which is used when the total target population is known.¹⁶ Considering the possibility of data loss, a total of 420 samples were included in the study with an increase of 10%. 20 surveys were not filled completely so they were not included in the study scope. As a result, the total sample size was 400.

Instruments

Participants were invited to take part in a 10-minute online survey that included a Sociodemographic Information Form, Psychological Hardiness Scale, and Compassion Satisfaction Scale. The data were collected through an online survey tool. The Psychological Hardiness Scale (*Personal Views Survey III-R*) was developed by Maddi and Khoshaba,¹⁷ and adapted into Turkish by Durak in 2002. It consists of 18 items that assess an individual's beliefs about themselves and their life, categorized into 3 sub-dimensions: attachment, control, and challenge. Items 3, 4, 6, and 8, as well as 10, and 11 are reverse scored. The scale employs a 4-point Likert-type response format, ranging from 0 to 3, with the following markings: (0) not at all true, (1) somewhat true, (2) mostly true, and (3) completely true. Durak conducted a reliability study on the scale, utilizing item-total correlations and internal consistency coefficients.¹⁸ Six items (2, 8, 13, 14, 16, and 18) were excluded from the original scale due to item-total correlations below 0.20. The internal consistency coefficient of the scale was found to be 0.68. The Compassion Satisfaction Scale, consisting of 12 items, was developed by Nas and Sak as a 1-dimensional scale to assess an individual's compassion satisfaction.¹⁹ The scale uses a 5-point Likert-type response format, ranging from 1 (strongly disagree) to 5 (strongly agree). Higher scores on the scale indicate higher levels of compassion satisfaction, while lower scores indicate lower levels of compassion satisfaction. The internal consistency coefficient of the scale was found to be 0.92.

Statistical Analyses

The data were analyzed using SPSS (version 25.0, IBM Corp., Armonk, New York, USA). The Kolmogorov-Smirnov was used for to assess the normality of the data. Continuous variables were expressed as means \pm standard deviation, and the categorical variables were expressed as frequencies and percentages. Independent sample t-test and 1-way ANOVA were used to examine the relationships between the variables. Compassion satisfaction and psychological hardiness were transformed into dichotomous data as "0" high and "1" low. Finally, Pearson correlation and logistic regression analyses were conducted to investigate the relationship between the independent and dependent variables. The Nagelkerke's R² and Cox & Snell's R² values for the model were analyzed, and the omnibus test for the model coefficient and the Hosmer-Lemeshow test were employed for significance testing. The significance level for the analyses was set at 0.05.

Ethical Consideration

This study was approved by the Ethical Committee of University of Health Sciences on March 22, 2023 with reference number 16884. Additionally, permission to conduct the study was obtained from the Türk Kızılay on May 7, 2023. Participants were informed about the aim and significance of the study and voluntarily provided written and verbal informed consent to participate.

Results

Participant Characteristics

A total of 400 individuals participated in the study, with 84 (21%) being personnel and 316 (79%) being volunteers. Among the 400 participants, 186 (46.5%) were male, and 214 (53.5%) were female. The participants' mean age was 28.44 ± 8.86 , and 195 of them (48.7%) were in the 18 - 25 age range. The percentages of married and single participants were 29.2% ($n = 117$) and 70.8% ($n = 283$), respectively. Among the participants, 159 (39.8%) had a bachelor's degree, and 319 (79.7%) reported not having any previous experience in disaster response. A total of 133 participants (33.3%) reported being deployed in Kahramanmaraş, followed by Hatay ($n = 112$, 28%) and Malatya ($n = 88$, 22%). The average duration of participation for the participants was 44.84 ± 40.39 days, with 216 of them (54.0%) being involved in the operation for 1 - 30 days (Table 1). Social/ sporting activity (30%) and logistics/ technical support (24%) were the most performed tasks, while media/ social media (4.4%) and animal protection (3.2%) were the least frequently performed tasks (Figure 2).

Psychological Hardiness and Compassion Satisfaction Level of Participants

The average level of psychological hardiness among the participants was found to be 23.78 ± 5.29 (ranges from 12 to 36), while the average level of compassion satisfaction was found to be 49.91 ± 15.53 (ranges from 12 to 60). The internal consistency coefficient of the Psychological Hardiness Scale was found to be 0.68, while the Compassion Satisfaction Scale had an internal consistency coefficient of 0.93 (Table 2). It was found that out of 400 individuals, 267 individuals (66.8%) had high compassion satisfaction and 133 individuals (33.2%) had low compassion satisfaction. From a psychological hardiness perspective, it has been found that out of 175 individuals, 43.8% have high psychological hardiness, while 56.3% have low psychological hardiness.

Analyzing Psychological Hardiness and Compassion Satisfaction by Demographics

A student t-test and one-way analysis of variance (ANOVA) were conducted to examine whether psychological hardiness and compassion satisfaction differ based on demographic variables. While there was no statistical significance, differences were found in gender, age, marital status, and education level, as well as occupation group between psychological hardiness; a statistically significant difference was found in the period of task and experience in disaster response between psychological hardiness. The psychological hardiness of individuals with a task duration of 1 - 30 days (24.49 ± 5.40) was found to be statistically significantly higher, compared to those with a task duration of over 30 days (22.92 ± 5.04) ($t = 2.979$, $p = 0.003$). Additionally, the psychological hardiness of individuals with previous experience in disaster response (24.90 ± 5.48) was found to be statistically significantly

Table 1. Demographic characteristics of participants

Variables	Volunteer (n = 316)	Personnel (n = 84)	Total (n = 400)
Gender, n (%)			
Male	125 (39.6)	61 (72.6)	186 (46.5)
Female	191 (60.4)	23 (27.4)	214 (53.5)
Age, n (%)			
18 - 25	189 (59.8)	6 (7.1)	195 (48.7)
26 - 33	67 (21.2)	32 (38.1)	99 (24.7)
34 - 41	32 (10.1)	28 (33.3)	60 (15.0)
42 - 49	22 (7.0)	15 (17.9)	37 (9.3)
≥ 50	6 (1.9)	3 (3.6)	9 (2.3)
Marital status, n (%)			
Married	63 (19.9)	54 (64.3)	117 (29.2)
Single	253 (80.1)	30 (35.7)	283 (70.8)
Level of education, n (%)			
High School	113 (35.8)	12 (14.3)	125 (31.3)
Associate Degree	74 (23.4)	11 (13.1)	85 (21.2)
Bachelor's Degree	113 (35.8)	46 (54.8)	159 (39.8)
Master's Degree	14 (4.4)	13 (15.5)	27 (6.7)
Doctoral Degree	2 (0.6)	2 (2.3)	4 (1.0)
Provinces where the duty is undertaken, n (%)			
Adana	26 (8.2)	9 (10.7)	35 (8.8)
Adiyaman	49 (15.5)	15 (17.9)	64 (16.0)
Diyarbakir	9 (2.8)	2 (2.4)	11 (2.8)
Elazığ	3 (0.9)	2 (2.4)	5 (1.3)
Gaziantep	15 (4.7)	17 (20.2)	32 (8.0)
Hatay	78 (24.7)	34 (40.5)	112 (28.0)
Kahramanmaraş	104 (32.9)	29 (34.5)	133 (33.3)
Kilis	32 (10.1)	4 (4.8)	36 (9.0)
Malatya	79 (25.0)	9 (10.7)	88 (22.0)
Osmaniye	30 (9.5)	6 (7.1)	36 (9.0)
Şanlıurfa	2 (0.5)	2 (0.5)	4 (1.0)
Period of task, n (%)			
1 - 30 days	180 (57.0)	36 (42.9)	216 (54.0)
31 - 60 days	52 (16.5)	20 (23.8)	72 (18.0)
61 - 90 days	32 (10.1)	19 (22.6)	51 (12.8)
91 - 120 days	32 (10.1)	3 (3.6)	35 (8.8)
≥ 121 days	20 (6.3)	6 (7.1)	26 (6.4)
Experience in disaster response, n (%)			
Yes	49 (15.5)	32 (38.1)	81 (20.3)
No	267 (84.5)	52 (61.9)	319 (79.7)

higher compared to those without previous experience in disaster response (23.50 ± 5.21) ($t = 2.129$, $p = 0.034$).

When comparisons related to compassion satisfaction were examined, no statistically significant difference was found between gender, age, and marital status. However, statistically significant differences were found between education level, occupational group, duration of task, and experience in disaster response concerning compassion satisfaction. Volunteers' compassion satisfaction (50.91 ± 15.08) was statistically significantly higher than that of personnel (46.13 ± 16.67) ($t = 2.527$, $p = 0.012$). Additionally, individuals who served for more than 30 days had a higher compassion satisfaction (52.44 ± 13.95) compared to those who served within 1 - 30 days (47.81 ± 16.47) ($t = -2.996$, $p = 0.002$).

Table 2. Statistics results on the Psychological Hardiness and Compassion Satisfaction Scales

	Psychological Hardiness Scale	Compassion Satisfaction
Mean	23.78	49.91
SD	5.29	15.53
Min - Max	12 - 35	12 - 60
CI (95%)	12.41 - 30.25	40.91 - 49.93
Cronbach's Alpha	0.68	0.93

CI, Confidence Interval; SD, Standard deviation.

Moreover, individuals who had previous experience in disaster response showed significantly higher compassion satisfaction (50.79 ± 15.09) compared to those without prior experience in disaster response (46.41 ± 16.82) ($t = -2.278$, $p = 0.023$).

Pearson Correlation and Binary Logistics Regression Analyses

A Pearson correlation analysis was performed to examine the relationship between psychological hardiness and compassion satisfaction. The results showed that there was a significant and positive correlation between psychological hardiness and compassion satisfaction ($r = 0.571$, $p < 0.001$). In addition, a binary logistics regression analysis was conducted to identify variables linked to psychological hardiness. Binary logistic regression analysis was conducted with a significance level of $\alpha = 0.05$ for entry and a removal level of $\beta = 0.10$. Table 3 summarizes the results of logistic regression analysis. The dependent variable was psychological hardiness, and the independent variables were gender, age, and marital status, as well as period of task, and compassion satisfaction. The dependent variable was coded as high-level = 1 and low-level = 0. The independent variables including gender, age, marital status, and period of task were set as dummy variables.

The results have revealed that the level of psychological hardiness is higher in males compared to females (OR = 1.930, CI = 1.115-3.340; $p < 0.05$) and is also higher in those with high compassion satisfaction compared to those with low compassion satisfaction (OR = 1.386, CI = 1.256-1.529; $p < 0.001$). Nagelkerke's R² and Cox & Snell's R² for the model were found to be 0.564 and 0.420 respectively. The Omnibus test of the model coefficient was significant ($p < 0.001$) and the Hosmer-Lemeshow test result was significant (0.409). The prediction success rate for the variables used in developing the model is 79.3%.

Furthermore, the simple linear regression conducted to test whether compassion satisfaction significantly predicts psychological hardiness revealed that compassion satisfaction significantly predicted psychological hardiness ($p < 0.001$) and indicated that compassion satisfaction explained 32.6% of the variance in psychological hardiness.

Limitations

This study is subject to several limitations. First, the diverse roles of participants across different cities made face-to-face data collection impractical, leading us to adopt a web-based survey approach. Second, our study involves volunteers from different professions, sourced from a single intervention team, and potentially limiting the generalizability of the findings to other intervention teams.

Table 3. Logistic regression model predicting the psychological hardiness

Independent variables	B	SE	Wald	p	OR	% 95 CI
Gender						
Female	0.658	0.280	5.525	0.019	1.930	1.115 – 3.340
Male (ref)						
Age						
≤ 25	0.267	0.345	0.595	0.440	1.305	0.663 – 2.569
≥ 26 (ref)						
Marital status						
Married	0.698	0.379	3.382	0.066	2.009	0.955 – 4.226
Single (ref)						
Period of task						
1 – 30 days (ref)	0.270	0.280	0.928	0.336	1.310	0.756 – 2.268
≥ 30 days						
CSS*	0.326	0.05	42.262	< 0.001	1.386	1.256 – 1.529

CSS: Compassion Satisfaction Scale; Ref: Reference; SE: Standard Error.

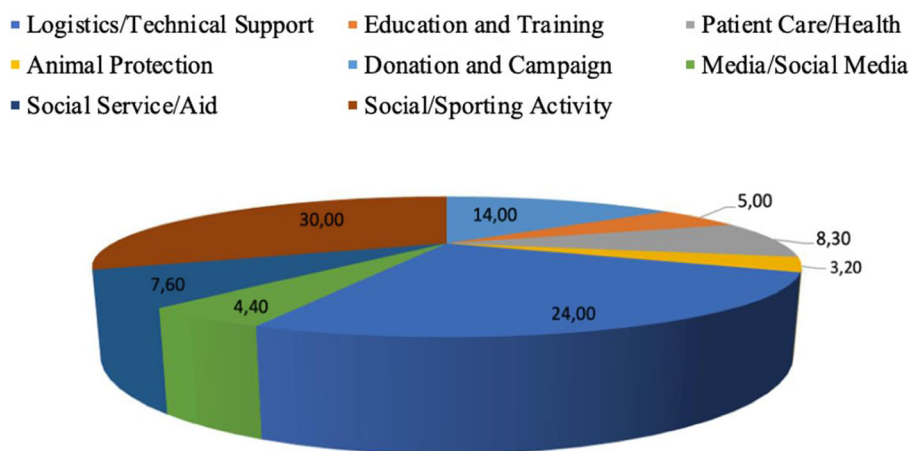


Figure 2. Fulfilled Task Areas.

Finally, although the areas in which participants were involved have been reported, detailed information regarding their critical experiences and exposure has not been provided.

Discussion

This study investigated the levels of psychological hardiness and compassion satisfaction among Türk Kızılay’s personnel and volunteers. Subsequently, it examined the potential relationship between these two crucial concepts crucial for disaster behavioral health. Typically, the literature has addressed these significant psychological factors separately. Therefore, the simultaneous exploration of both factors and the rare comparison of paid personnel and volunteers made this research notable and substantial.

Primarily, it is essential to acknowledge the presence of various terms resembling psychological hardiness, such as emotional strength, and psychological toughness, as well as psychological resilience in the literature. Moreover, it is known that various scales have been developed to measure these concepts.^{20,21} However, given the greater impact of hardiness on mental health and due to being a scale developed for individuals experiencing earthquakes, our

study employed the previously validated Psychological Resilience Scale (Personal Views Survey III-R).^{22,23} When examining the literature related to compassion, it was observed that adapted scales in Turkish took on different names, and there is a scarcity of measurement tools designed to determine compassion satisfaction. Therefore, due to its suitability for the study design and high internal consistency coefficient, the Compassion Satisfaction Scale developed by Nas and Sak in 2021 was preferred.¹⁹

The findings of this study revealed that the Türk Kızılay’s personnel and volunteers scored an average of 23.78 ± 5.29 on the Psychological Hardiness Scale and an average of 49.91 ± 15.53 on the Compassion Satisfaction Scale. When considering the lowest possible scores that can be obtained from the scales and comparing this study with previous research conducted separately on psychological hardiness and compassion satisfaction, it has been observed that the rates of psychological hardiness and compassion satisfaction in our study were higher.^{24–28} Furthermore, it was found that gender, age, and marital status did not significantly affect psychological hardiness and compassion satisfaction. While there are studies in literature that indicate the effectiveness of these factors,^{29–32} there are also studies that support our results.^{27,33,34}

Despite both volunteers and personnel having their needs such as transportation, accommodation, and meals covered for free, and no socioeconomic differences between the two groups, the compassion satisfaction of volunteers was found to be higher than personnel. It is believed that this difference between the two groups arises from volunteers carrying out their work entirely on a voluntary basis and focusing on helping others without being associated with financial incentives.³⁵ In other words, our findings reflect a dynamic where personnel's efforts are compensated tangibly, with money, whereas volunteers are rewarded in a more intrinsic sense with satisfaction. Additionally, while there is no crucial difference in workload between personnel and volunteers, the obligation for personnel to participate in all kinds of situations due to their job responsibilities is thought to lead to emotional exhaustion, and consequently a decrease in compassion satisfaction levels.

At this point, it is important to mention the "Be a Volunteer" online volunteering project, which was implemented to increase volunteer activities within the Türk Kızılay's Volunteer Management Directorate and to make volunteer management more functional. This platform, accessible at <https://gonulluol.org>, allows individuals interested in volunteering to register, receive training for the volunteer areas they choose, participate in volunteer activities that match their qualifications, and serves as a social meeting point where they can share their experiences.³⁶ Indeed, volunteers who participated in the Kahramanmaraş Earthquake were selected and assigned within this scope.

It has been observed that compassion satisfaction increases with the duration of tasks in a disaster. It is believed that this is due to more experience, the development of empathy, and an increase in social connectedness and solidarity. Individuals who serve in disaster areas for an extended period may have a chance to understand the suffering and challenges of others more closely, leading to a greater sense of empathy and a desire to share the pain and offer help, thus contributing to the increase in feelings of compassion.

Finally, it has been found that experience in disaster response is a factor that affects both psychological resilience and compassion satisfaction. Certainly, the experience in disaster response efforts can enhance individuals' compassion satisfaction by helping suffering individuals. Working in challenging and traumatic conditions, disaster responder teams providing aid and support can positively influence their mental well-being and emotional welfare. Furthermore, individuals exposed to previous experience in disaster response can develop greater psychological hardiness over time. These experiences may contribute to the enhancement of problem-solving skills and the strengthening of social support systems, thereby improving their ability to cope with future challenging situations. Nevertheless, 1 remarkable aspect is the unexpected deviation of research findings from the common assumption that age typically correlates with experience. Despite Türk Kızılay's personnel being notably older than volunteers, it has been found that a significant portion of them have limited experience in handling disaster situations. When interpreting this outcome, it's essential to consider that the fieldworkers involved in the study encompass not only senior personnel but also office staff, and some of them may have recently joined the organization.

Conclusion

This study examined the psychological hardiness and compassion satisfaction levels of the Türk Kızılay's personnel and volunteers involved in the Kahramanmaraş Earthquake on February 6, 2023.

The results indicated that the Türk Kızılay team exhibited high levels of psychological hardiness and compassion satisfaction. A significant and positive relationship was found between psychological hardiness and compassion satisfaction, with compassion satisfaction explaining 32.6% of psychological hardiness. Future longitudinal and experimental studies are needed.

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Authors contribution. KK: Conceptualization, Methodology, Project administration, Supervision, Writing - Review & Editing, Writing - Original Draft; ADK: Investigation, Resources, Writing - Review & Editing, Writing - Original Draft, Formal analyses; CC: Conceptualization, Methodology, Project administration, Supervision.

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Competing interests. The author(s) declare none.

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