Original Article

Investigation of the Level of Occupational Commitment and Psychological Hardiness in Disaster Workers

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Abstract

Aim: This research aimed to determine the occupational commitment and psychological hardiness levels of disaster workers and to examine the relationship between these two concepts.
Method: The sample of this cross-sectionaal study consisted of the personnel of the Provincial Directorate of Disaster and Emergency and the Fire Brigade Workers of the Metropolitan Municipality working in a city that is an important disaster area in Turkey. Introductory information forms including sociodemographic and occupational characteristics, Occupational Commitment Scale, and Psychological Resilience Scale were used to collect data. Data were evaluated using descriptive statistics, dependent groups t-test, one-way analysis of variance (ANOVA), Tukey HSD test, and correlation analysis.
Results: The disaster workers scored 29.97 ± 5.74 on the Occupational Commitment Scale and 59.59 ± 16.03 on the Psychological Hardiness Scale. The occupational commitment of the workers, the type of occupation, the state of liking the occupation, and their psychological hardiness was affected by their occupational working time. It was concluded that the occupational commitment of the workers had a moderately statistically significant and positive relationship with hardiness ($p < 0.001$).
Conclusion: In the study, it was determined that the disaster workers have a medium level of occupational commitment and psychological hardiness. It was determined that the psychological hardiness levels of the workers who are committed to their occupation are higher. It was concluded that occupational commitment factors should be taken into account at the point of protecting the mental health of disaster workers and improving their psychological hardiness.

Keywords: Disaster, Disaster Workers, Occupational Commitment, Psychological Hardiness

Introduction

Natural or man-made disasters have affected millions of people over the years and cause significant damage. According to the Emergency Event Database (EM-DAT) 2021 report of the world, there were 432 natural disasters, 101.8 million people were affected by these disasters, and 10,492 individuals died. In the last report published by the Disaster and Emergency Management Presidency (AFAD) (2020) in Turkey, it was stated that there were 1,465 disasters and emergencies in 2017, 1,788 in 2018, and 3,724 in 2019. In the same report, it was emphasized that 23,646 earthquakes, 245 landslides/rockfalls, 499 floods, and 10 avalanches occurred in and around Turkey in 2019, and this year was a more intense year compared to previous years in terms of intervened events. Search and rescue teams, first and emergency aid personnel, law enforcement officers, members of the media, and psychosocial support personnel were involved in these incidents (Altuntas, 2017; Pak Gure, 2022). In the current report published by AFAD (2020), it has been

reported that 12,407 search and rescue personnel affiliated with the AFAD provincial and union directorate are the first to arrive at the scene in case of disaster. Disaster workers are tasked with providing search and rescue, debris removal, and first and emergency aid. They meet the needs of disaster victims such as shelter, food, communication, security and education. In addition, they have practices such as providing psychosocial support and helping to protect special needs groups (Karatas & Barut, 2021; Pak Gure, 2022).

The destruction and deaths caused by disasters can have long-lasting psychological effects on survivors. In addition to disaster survivors, occupational response teams (e.g. AFAD workers, police, firefighters, and paramedics), resulting from participation in recovery activities in disaster areas due to secondary trauma, are at risk of developing adverse health consequences (Ballard, 2013; Bromet et al., 2017a , b; Mahaffey et al., 2021). Depression, post-traumatic stress disorder (Bromet et al., 2017a , b; Mahaffey et al., 2021; Pak Gure, 2022), anxiety (Brooks et al., 2020; Pak Gure, 2022), psychological attrition (Emanuel & Ursano, 2020) are the most common mental health problems experienced by disaster workers. Studies have also shown that 32.4% of the firefighters have post-traumatic stress disorder (Tomaka et al. 2017), 46.8% had suicidal ideation and 15.5% had attempted suicide (Stanley et al., 2015). Similarly, research shows that longer shifts and the risk of personal injury or contamination are associated with an increased risk of sleep disturbances, harmful alcohol use, anxiety, depression, and posttraumatic stress syndrome among first responders (Chatzea et al., 2018; Jones et al., 2018). People who are unable to absorb the impact of a disaster and return to "normal life" may show signs of negative mental health, including distress and psychological dysfunction (Edward, 2012). It is reported that those who have a better psychological adaptation to the situation and have the ability to cope with stress are “resilient” (Weems & Graham, 2014). It is especially important to increase resistance or endurance in groups that will be repeatedly called to respond to disasters, such as AFAD workers, firefighters and paramedics (Mahaffey et al., 2021).

Psychological hardiness is a feature that enables the individual to cope with difficulties, develop positive adaptation despite difficulties and can be learned later (Buz & Genc, 2019). Although there are some innate advantages and disadvantages to psychological hardiness (Eksi et al., 2019), this concept can be developed later (Buz & Genc, 2019). Experienced events can make individuals psychologically weak, however, they can improve their hardiness. In the literature, workers it is seen that with high psychological hardiness have less work stress (Deniz, Cimen & Yuksel, 2020), protect their physical and mental health by using effective coping strategies with stress (Isik, 2016), experience less peritraumatic distress (Raveis et al., 2017), experience less posttraumatic stress syndrome (Shepherd et al., 2017), having a low anxiety level (Sakuma et al., 2015), experience less compassionate fatigue and are less likely to experience burnout (Tseng et al., 2018).

Many factors affect the psychological hardiness of disaster workers. Psychological hardiness is important in protective factors as well as many risk factors including premature birth, adverse life events, illness of one's own or family members, economic difficulties, war and natural disasters, neglect and abuse. Studies show that having protective factors rather than individual characteristics increases hardiness (Kavi & Karakale, 2018). Self-confidence, communication skills, family and occupational life are protective factors. The ability of the individual to manage the stress he experienced in his occupation, to solve problems faster, to be more active, energetic and willing increases psychological hardiness. Occupational commitment refers to the psychological and emotional dimension beyond determining the time of entry in and exit from work and performing tasks (Ju & Oh, 2016). It is stated that workers with high commitment to their occupation perform better (Fidanboy, 2019), mostly have positive emotions such as joy, enthusiasm and hope, and have a positive effect on dedication to work and role behavior (Mumcu, 2022).

Considering the chaotic and traumatic nature of the disaster incident and the high level of psychological problems experienced by

disaster workers, it is important and a priority to determine psychological resilience and occupational commitment for this vulnerable population. This situation is also highlighted in a recent scoping study (Palmer et al., 2022). Examining the psychological hardiness and occupational commitment of disaster workers in solving the problems they experience may contribute to making emergency response services more efficient, disaster workers to work more effectively and efficiently, and to the planning and implementation of in-service trainings and psychological interventions. Besides, all these can shed light on the field of work psychology. This study is the only study to examine the relationship between occupational commitment and psychological hardiness in disaster workers as far as is known. For this reason, the study aimed to determine the level of occupational commitment and psychological hardiness of AFAD and fire brigade workers, who are at the forefront of disaster response, and to examine the relationship between these two concepts.

Methods

Study Design: This study is a cross-sectional study conducted to determine the level of occupational commitment and psychological hardiness of disaster workers and to examine the relationship between these two concepts.

Sample Selection: The population of the research consisted of individuals working under the Provincial Disaster and Emergency Directorate and the Metropolitan Municipality Fire Brigade Department in a city in Turkey (N = 146). The study tried to reach the whole universe without using the sampling method. The universe of the study consisted of all the individuals working in the Provincial Directorate of Disaster and Emergency and 88% of the firefighters working in the 1st Region of the Metropolitan Municipality Fire Brigade Department (n = 138).

Data Collection: Data collection was carried out between 18 July and 31 July 2022 by means of a face-to-face questionnaire. The data were obtained by using the introductory information form, the Occupational Commitment Scale and the Psychological Hardiness Scale.

Introductory information form: In the form developed by the researchers in line with the literature (Ballard, 2013; Brooks et al., 2020; Mahaffey et al., 2021; Sakuma et al., 2015) there are 20 questions that include the sociodemographic and occupational characteristics of the participants.

Occupational Commitment Scale: The "Occupational Commitment Scale", developed by Blau (1985) in order to determine the level of occupational commitment of the person, consists of a single factor and 8 items and is graded as a 5-point Likert scale. The score that can be obtained from each item of the scale is a minimum of 1 and a maximum of 5. The total score that can be obtained from the scale is a minimum of 8 and a maximum of 40. The analyzes regarding the validity and reliability of the scale in Turkish were made by Tak and Ciftcioglu (2008). Higher scores from the scale indicate that individuals' levels of work engagement, satisfaction, and confidence increase. The Cronbach's Alpha coefficient of the original scale was 0.67, and the Cronbach's Apha coefficient of the scale translated into Turkish was 0.77 (Tak & Ciftcioglu, 2008). In this study, the Cronbach Alpha coefficient was found to be 0.65.

Psychological Hardiness Scale: The "Psychological Hardiness Scale", developed by Isik (2016) to determine the level of resilience of the individual, is in 5-point Likert type and consists of 21 items and three sub-dimensions. The scale is “commitment” (1^{st}, 2^{nd}, 3^{rd}, 5^{th}, 6^{th}, 18^{th}, 21^{st} items), “control” (4^{th}, 10^{th}, 11^{th}, 12^{th}, 15^{th}, 19^{th}, 20^{th} items) and "challenge" (7^{th}, 8^{th}, 9^{th}, 13^{th}, 14^{th}, 16^{th}, 17^{th} items). Items 2^{nd} and 15^{th} of the scale are reverse coded. The score that can be obtained from each item of the scale is minimum 0 and maximum 4. The total score that can be obtained from the scale is a minimum of 0 and a maximum of 84. An increase in the scores to be obtained from the total and sub-dimensions of the scale indicates a high level of psychological hardiness. While the Cronbach Alpha reliability coefficient for the whole scale was 0.76, the Cronbach Alpha reliability coefficients for each sub-dimension was Between 0.62-0.74. In order to determine the reliability of the scale with the test-retest method, the scale was reapplied to 54 individuals with an interval of two weeks. As a result of the application, the test-retest reliability coefficient of the scale was found to be 0.81. The analyzes made within the

scope of the reliability of the scale show that the reliability of the scale is sufficient (Isik, 2016). In this study, the Cronbach Alpha reliability coefficient of the scale was calculated as 0.86.

Data Analysis: The data of this study were analyzed using IBM SPSS Statistical Package Program 21.0 (IBM Corp. Armonk, NY: USA. Released 2012). In the analysis of the data, number, percentage distribution, min.-max. values, arithmetic mean, t test, one-way ANOVA, Tukey HSD post hoc test were used. The conformity of the data to the normal distribution was evaluated with the Kolmograv-Smirnov test. The relationship between occupational commitment and psychological hardiness was examined by Pearson correlation analysis. Statistical significance was accepted as $p < 0.05$.

Ethical Evaluation: This study was approved by the Non-Interventional Clinical Research Ethics Committee of a university. The study was carried out in accordance with the principles of the Declaration of Helsinki. The study was not funded by any institution. After the necessary explanations were given to the participants about the purpose and method of the study, the volunteers were asked to participate in the study, and verbal consent was obtained. No identifying information was collected, which ensured the anonymity of the participants. They were also assured of the confidentiality of the data.

Results

The socio-demographic and health-related characteristics of the participants are given in Table 1. The mean age is 37.44 ± 9.98, and 42% of the participants are between the ages of 31 - 40, mostly male (80.4%), married (76.8%) and undergraduate (59.4%). The majority of the participants reported that they were registered with a sports club and were in “good” health (Table 1).

The distribution of the participants according to occupational characteristics is shown in Table 2. More than half of the participants are firefighters. The majority of the participants have been working for 10 years or less and 52.2% of them are on duty 24 hours a day. The majority of the participants (73.9%) experinence floods, traffic / transportation accidents, earthquakes, fires, landslides, industrial accidents, and explosions, respectively. The majority of the participants (84.8%) received first aid, non-formal education, basic disaster awareness, search and rescue, basic life support, CBRN, advanced life support, and simulation training, respectively. In addition, although the majority of the participants (94.9%) like their occupation, 62.3% of them reported the economic return of their occupation as "moderate" (Table 2).

Table 3 shows the participants' total mean scores on the occupational commitment scale and the total and sub-dimension mean scores on the psychological hardiness scale. The participants got a total of 29.97 ± 5.74 points from the occupational commitment scale and 59.59 ± 16.03 points from the psychological hardiness scale (Table 3).

The findings regarding the comparison of the total and sub-dimension scores of the disaster workers' occupational commitment scale and psychological hardiness scale, and the socio-demographic and occupational characteristics are presented in Table 4. It was determined that there was a significant difference between the total score of occupational commitment and the type of occupation ($p = 0.047$, $t = -2.059$) and the status of liking the occupation ($p = 0\ .001$, $t = 5.121$). A statistically significant difference was found between the total and all sub-dimensions of the psychological hardiness scale and the duration of occupational work ($p < 0.05$). In addition, statistically significant differences were found between "control sub-dimension" and age ($p = 0.035$, $F = 2.952$), "challenge sub-dimension" and type of occupation ($p = 0.026$, $t = 2.258$) of the psychological hardiness scale (Table 4).

The relationship between the participants' total score on the occupational commitment scale and the total and sub-dimension scores on the psychological hardiness scale is given in Table 5. It was determined that there was a moderately positive and significant relationship between the occupational commitment of the participants and their psychological hardiness ($r = 0.569$, $p < 0.001$). In addition, it was determined that there was a moderately positive and significant relationship between the participants' occupational commitment and the "commitment"($r = 0.655$, $p < 0.001$),

"control"(r = 0.463, p < 0.001) and "challenge"(r = 0.455, p < 0.001) sub-dimensions of psychological hardiness (Table 5).

Table 1. Socio-demographic and health-related characteristics of the participants

Variables	**X̄ ± SD**
Age	37.44±9.98 (min.=20, max.=60)
	n (%)
Age (year)	
20-30	29 (21.0)
31-40	58 (42.0)
41-50	40 (29.0)
51-60	11 (8.0)
Gender	
Female	27 (19.6)
Male	111 (80.4)
Marital status	
Single	32 (23.2)
Married	106 (76.8)
Education	
Primary and seconder school	19 (13.8)
High school	37 (26.8)
University	82 (59.4)
Child presence	
Yes	106 (76.8)
No	32 (23.2)
Number of children*	
1-2	77 (72.7)
3-4	26 (24.5)
5 and over	3 (2.8)
Family type	
Nuclear family	130 (94.2)
Extended family	8 (5.8)
Smoking	
Yes	41 (29.7)
No	97 (70.3)
Status of being registered with a sports club	
Yes	74 (53.6)
No	64 (46.4)
Health assessment status	
Very good	38 (27.5)
Good	64 (46.4)
Middle	34 (24.7)
Bad or very bad	2 (1.4)
Total	**138 (100.0)**

**Evaluated on participants with children.

Table 2. Distribution of the participants according to their occupational characteristics

Variables	n (%)
Employment	
AFAD staff	56 (40.6)
Firefighter	82 (59.4)
Duration of occupational work	
10 years and less	84 (60.9)
11-20 years	42 (30.4)
21 years and more	12 (8.7)
Working system	
Day shift	49 (35.5)
Shift work (sometimes day and night)	17 (12.3)
24 hour watch system	72 (52.2)
The status of experience any disaster event	
Yes	102 (73.9)
No	36 (26.1)
Type of disaster assigned*	
Earthquake	54 (13.4)
Fire	44 (10.9)
Landslide	38 (9.4)
Flood	86 (21.3)
Explosions	23 (5.7)
Industrial accidents	30 (7.4)
Wars	44 (10.9)
Traffic / transportation accidents	65 (16.1)
Other (CBRN, terrorist incidents)	20 (4.9)
Training for emergencies	
Yes	117 (84.8)
No	21 (15.2)
Trainings received*	
First aid	107 (22.2)
Basic life support	57 (11.9)
Advanced life support	24 (5.0)
Fire training	95 (19.8)
Search-rescue	65 (13.5)
Basic disaster awareness	66 (13.7)
CBRN	42 (8.7)
Simulation	23 (4.8)
Other	2 (0.4)
The state of experiencing/listening to a traumatic event in the disaster area	
Yes	72 (52.2)
No	66 (47.8)
The state of liking the occupation	
Yes	131 (94.9)
No	7 (5.1)
Economic return of the occupation	
Good	11 (8.0)
Moderate	86 (62.3)
Bad	41 (29.7)
Total	**138 (100.0)**

*More than one option is marked.

Table 3. The mean scores of the participants from the scales of occupational commitment and psychological hardiness

Scales		X̄ ± SD	Min.	Max.
Occupational Commitment Scale		29.97±5.74	8	40
Total				
Psychological Hardiness Scale		59.59±16.03	7	83
Total		20.22 ±6.00	3	28
Commitment		18.11±4.76	4	28
Control		21.25 ±6.58	0	28
Challenge				

Table 4. Distribution of participants' mean scores on the occupational commitment and psychological hardiness scales according to various variables

Dependent variable	Occupational Commitment Scale	Psychological Hardiness Scale			
	Total	Commitment	Control	Challenge	Total
Independent variable	X̄±SD	X̄±SD	X̄±SD	X̄±SD	X̄±SD
Age (year)					
20-30[a]	30.82±6.40	20.00±6.23	19.24±5.21	21.44±7.07	60.68±17.35
31-40[b]	28.94±5.25	19.62±5.78	17.77±4.49	21.27±5.89	58.67±14.34
41-50[c]	31.15±5.81	22.05±4.72	18.75±3.90	22.25±5.17	63.05±12.64
51-60[d]	28.90±5.73	17.36±9.06	14.63±6.37	17.00±11.26	49.00±26.48
F, *P*	1.531, .209	2.343, .076	**2.952, .035 a>d**	1.881, .136	2.401, .071
Gender					
Female	29.70±5.58	19.74±5.71	18.37±4.90	22.44±5.48	60.55±14.23
Male	30.04±5.80	20.34±6.08	18.05±4.74	20.96±6.81	59.36±16.49
t, *P*	-.276, .783	-.466, .642	.308, .758	1.049, .296	346 .730
Marital status					
Single	30.25±6.09	19.68±6.28	18.56±4.92	21.18±6.60	59.43±16.28
Married	29.89±5.66	20.38±5.93	17.98±4.72	21.27±6.61	59.64±16.03
t, *P*	.304, .761	-.576, .565	.604, .547	-.065, .949	.063 .950
Education					
Primary and secondary school	30.64±5.58	20.78±3.99	18.15±3.83	20.47±5.20	59.42±11.63
High school	29.52±5.84	21.45±6.09	17.89±4.95	21.40±7.26	60.75±17.62
University	29.97±5.741	19.53±6.29	18.20±4.91	21.36±6.60	59.10±16.29
F, *P*	.263, .263	1.415, .247	056, .946	.153, .858	.134 .875
Child presence					
Yes	29.75±5.97	19.34±7.02	18.31±5.47	20.71±7.66	58.37±18.82
No	29.97±5.55	20.33±5.57	18.06±4.46	21.46±6.04	59.96±15.16
t, *P*	-.188, .852	-.783, .435	.246, .806	-.543, .588	.489 .625
Family type					
Nuclear family	30.03±5.81	20.30±5.97	18.16±4.72	21.39±6.46	59.86±15.79
Extended family	29.00±4.69	19.00±6.69	17.25±5.65	19.00±8.48	55.25±20.19
t, *P*	.495, .622	.593, .554	.528, .598	.998, .320	.789 .432
Employment					
AFAD staff	28.80±5.21	20.14±4.65	18.67±3.41	22.60±3.95	61.42±9.69

Firefighter	30.78±5.98-	20.28±6.79	17.73±5.48	20.32±7.78	58.34±19.15,
t, *P*	**2.059, 047**	-.141, .888	1.249, .214	**2.258, .026**	1.112 .268
Duration of occupational work					
10 years and less[a]	30.51±5.71	20.72±5.76	18.28±4.35	21.46±6.14	60.47±14.85
11-20 years[b]	28.95±5.21	20.42±4.50	18.92±3.76	22.57±3.79	61.92±10.01
21 years and more[c]	29.83±5.741	16.00±10.04	14.08±8.11	15.16±12.40	45.25±30.17
F, *P*	.036, .358	**3.407, .036 a>c**	**5.275, .006 a>c , b>c**	**6.498, .002 a>c, b>c**	**5.748, .004 a>c b>c**
Working system					
Day shift	28.65±5.69	19.61±5.76	18.40±4.48	21.73±5.87	59.75±14.28
Shift work	31.52±5.03	19.82±6.50	17.94±5.01	20.76±6.30	58.52±16.09
24 hour watch system	30.51±5.832	20.73±6.07	17.95±4.94	21.04±7.14	59.59±16.03
F, *P*	.276, .107	.551, .578	.141, .868	.213, .809	.042 .959
The status of experience any disaster event					
Yes	28.00±6.58	17.00±9.89	16.75±9.50	19.75±13.22	60.46±14.75
No	31.00±5.24	24.60±3.91	17.60±2.19	24.60±3.28	57.13±19.21
t, *P*	-.764, .470	-1.590, .156	-.175, .871	-.716, .521	1.069 .287
Training for emergencies					
Yes	30.20±5.90	20.46±5.59	18.29±4.40	21.66±5.81	60.41±14.19
No	28.71±4.651	18.90±7.95	17.14±6.45	18.95±9.71	55.00±23.79
t, *P*	.095, .275	1.095, .275	.782, .442	1.241, .227	1.012 .322
The state of experiencing/listening to a traumatic event in the disaster area	30.13±6.12	20.30±5.92	18.15±4.51	21.23±6.27	61.45±13.00
	29.80±5.34	20.13±6.13	18.07±5.05	21.27±6.95	57.56±18.68
	.342, .733	.165, .869	.095, .925	-.032, .974	1.411 .161
Yes					
No					
t, *P*					
The state of liking the occupation					
Yes	30.33±5.63	20.40±5.91	18.18±4.71	21.29±6.45	59.87±15.73
No	23.28±3.40	16.85±7.03	16.85±5.89	20.57±9.21	54.28±21.60
t, *P*	**5.121, .001**	1.531, .128	.716, .475	.280, .780	.899.370

Table 5. The relationship between the participants' occupational commitment and psychological hardiness levels

Scales		Occupational commitment	Psychological hardiness			
		Total	Commitment	Control	Challenge	Total
Occupational commitment scale	r	.1	.655	.463	.455	569
	p		<.001	<.001	<.001	<.001
	n	138	138	138	138	138
Psychological hardiness scale						
Commitment	r	.655	1	.730	.786	.914
	p	<.001		<.001	<.001	<.001
	n	138	138	138	138	138
	r	.463	.730	1	.815	.905

Control	p	<.001	<.001		<.001	<.001
	n	138	138	138	138	138
Challenge	r	.455	.786	.815	1	.947
	p	<.001	<.001	<.001		<.001
	n	138	138	138	138	138
	r	.569	.914	.905	.947	1
Total	p	<.001	<.001	<.001	<.001	
	n	138	138	138	138	138

Discussion

In this study, the relationship between occupational commitment and psychological hardiness was examined. This study is the only study that examines the relationship between occupational commitment and psychological hardiness in disaster workers as far as is known. For this reason, the findings obtained have been discussed in a limited number of studies. In the study, it was determined that the majority of the participants were male, have been working with a 24-hour watch system for 10 years or less, have worked in at least one disaster incident, received various pieces of training on unusual situations, experienced at least one traumatic event in the disaster area, and despite this, they loved their occupation. In similar studies conducted in different provinces in Turkey, the percentage of men working in the disaster area was found to be high. This situation can be explained by the fact that the work performed requires physical strength and stems from a general gender perception of disaster response. Additionally, it was found to be important in our study that the disaster workers received training in different subjects. Personnel who receive training for disasters should be calm, comfortable, determined in the field and should be able to make clear decisions. The fact that these individuals receive social support and find a way for themselves to cope with problems is an important criterion related to psychological hardiness. Taking responsibility, behaving sensibly and problem-solving oriented approaches can increase the psychological hardiness of workers.

Occupational Commitment and Related Factors

It defines the attitude of individuals towards their occupation or work as occupational commitment (Blau, 1985). In this study, the occupational commitment of the disaster workers is above the middle level, however not at a high level. A high level of occupational commitment shows that workers' commitment to work, satisfaction and confidence levels increase (Blau, 1985). Considering that the region where the study was conducted is a first-degree disaster zone, it is observed that the occupational commitment levels of the workers are insufficient. For this finding, which is evaluated as important, the occupational commitment of individuals should be developed in the educational process and maintained by strengthening throughout their occupational life. Increasing career opportunities, making time arrangements, effective use of wage and performance evaluation systems, and having various pieces of training and activities can be recommended for the development of occupational commitments.

In this study, most variables (age, gender, marital status, education level, presence of children, family type, occupational working time and working system etc.) did not affect the level of occupational commitment. In the study conducted by Gurer, Adilogullari and Caymaz (2012), the organizational commitment levels of AKUT Search and Rescue Association volunteers did not differ significantly in terms of age, education, length of stay in the organization, occupational

status, gender, and marital status. Similarly, in the study conducted by Gokalp (2021) on nurses, it was emphasized that the age variable had no effect on the occupational commitment of the participants. In the last study conducted by Acar (2022) on nurses, it was reported that the age and gender variables did not affect the occupational commitment scores of health workers. It has been determined that the studies and our research findings support each other.

In addition, in this study, it was determined that the individuals who love their occupation have higher occupational commitment. Spurk et al. (2019) on the factors affecting occupational commitment, it was reported that positive events in occupational life positively affect occupational commitment. Similarly, the occupational commitment was found to be affected by work attitudes, negative emotions, emotionally charged patient experiences, and lack of social support (ten Hoeve et al., 2020). The high level of occupational commitment in individuals who love their occupation may contribute to the increase in productivity and quality of the work and indirectly to the development of life satisfaction.

Psychological Hardiness and Related Factors

Disaster workers, especially those who have been exposed to more than one disaster, are at high risk for different trauma-related mental health problems such as post-traumatic stress disorder and depression. In this study, the psychological hardiness levels of the participants were slightly above the average score. However, this does not mean that the level of psychological hardiness is high. In the study conducted by Savur (2012) on groups with and without disaster experience, it was reported that the psychological hardiness levels of those who participated in the disaster study were high. Similarly, in studies conducted on healthcare occupations, it was determined that the psychological hardiness of the participants was moderate (Colak Sari, 2018; Gue et al., 2018) or above (Manomenidis et al., 2018; Sarigul & Ugurluoglu, 2022). Increasing the level of psychological hardiness of the workers is considered as an important indicator that they will adapt to all changes. In this context, especially disaster workers can be informed about psychological hardiness with in-service training programs, and it can contribute to the development of hardiness perceptions by increasing the motivation of the workers. There are many factors that affect psychological hardiness. However, in this study, no relationship was found between psychological hardiness and gender, marital status, educational status, presence of children, family type, working system, experience a disaster, training received for disaster, experiencing trauma in the field of disaster, and liking the occupation. Similarly, in recent studies on disaster workers, no relationship has been reported between psychological hardiness and sociodemographic characteristics (gender, marital status, educational status (Coban, 2020), income level (Zafer, 2016) and type of work (Coban, 2020). In this study, it was determined that those who have worked in the occupation for 10 years or less have higher levels of psychological hardiness than those who have a longer occupational life. Contrary to our study, in the study conducted by Colak Sari (2018), those who working in the occupation for 11 years or more had higher levels of psychological hardiness. Working under constant stress can make it difficult for an individual to cope with something, which can lead to a decrease in psychological hardiness.

The belief that a person can influence the events taking place around him through his efforts and the tendency to act in this direction is defined as the “control” dimension of psychological hardiness. In this study, the control subscale scores of the individuals aged 20 -30 were found to be higher than those of the individuals aged 51 - 60. However, Deniz Pak et al. (2017) found that there was a positive yet weak relationship between psychological hardiness and age in emergency room workers. Control is the belief of turning stresses from potential disasters into opportunities for growth or psychological hardiness. Accordingly, it can be suggested that disaster workers develop strategies aimed at increasing their sense of control.

The “challenge” sub-dimension of psychological hardiness is defined as beliefs that undergo change rather than stability as a

normal way of life and that create motivating opportunities for personal development rather than security threats. In this study, the challenge scores of AFAD workers were found to be higher than those of the fire department workers. On the contrary, in the study by Shepherd (2020), no significant difference was found between psychological hardiness and the type of task. This situation can be attributed to the fact that disaster workers work in difficult conditions outside of occupational training, stress management and psychology training and experiences.

Occupational Commitment and Psychological Hardiness

In this study, it was determined that there is a positive moderate relationship between occupational commitment and psychological hardiness. Mao et al. (2022) emphasized that the occupational commitment of individuals who have psychological hardiness to disasters is also strong. Similarly, Gerami Nejad et al. (2018) stated a positive and significant relationship between psychological hardiness and occupational commitment in a study on nurses. Considering the studies and the significant relationship between psychological hardiness and occupational commitment in this study, it is recommended to include strategies for increasing hardiness in training programs for disaster workers to enhance the level of occupational commitment. Thus, by increasing psychological hardiness, the level of commitment to the occupation can be increased.

Conclusion: In this study, which determined that the disaster workers have a medium level of occupational commitment and psychological hardiness, it was concluded that the psychological hardiness of those who are committed to their occupation is higher. The high level of commitment and psychological hardiness of workers for the occupation is an important factor for effective intervention in disaster situations. According to this result, it is predicted that providing psychological preparation to the individuals who will work in the field of disaster during their undergraduate education and/or informing them before and after the disaster during the assignment phase will positively affect their psychological well-being and occupational commitment. Additionally, there is a critical need for in-service training and psychological hardiness building programs aimed at helping all public, private sector and non-governmental organizations workers' and volunteer individuals develop coping skills in disasters and emergencies.

Limitations: Assuming that the scales used fully measure occupational commitment and psychological hardiness, this study was conducted with participants working in the disaster area in only one province in Turkey. For this reason, the findings obtained from the study only cover the relevant institutions in the province where the study was applied. Conducting future studies with officials or volunteers working in all public, private and non-governmental organizations function in the disaster area will make the results more meaningful.

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