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ORIGINAL PAPER

Determining the disaster preparedness of university staff: the case of artvin coruh university, Turkey

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Abstract
This research undertaking ascertains the preparedness and perception of academic and administrative personnel at Artvin Çoruh University regarding disaster risk. For this study, a descriptive and cross-sectional research approach was used. The study population comprises academic and administrative personnel employed at the university. The sampling methodology did not apply any specific method, and the study comprised 218 employees who willingly agreed to participate. However, because of the presence of individuals who provided partial responses in the questionnaires, the total number of participants included in the study sample was reduced to 215. A statistically significant correlation was identified, as measured by the DPS total score, between the gender of the faculty and staff and their knowledge of emergency action plans at the university. A statistically significant link was discovered between the DRPS total score and the likelihood of experiencing a disaster, material loss, and the consideration of relocation to avoid disaster risk. A statistically significant relationship was found between the DPS total score and the status of receiving disaster training, compulsory disaster insurance of the house of residence, and disaster preparation. This study also investigated the correlation between the DRPS and DPS total scores of university workers and their age. A statistically insignificant correlation was observed between the DRPS and DPS total scores. In this regard, it is advised that staff members of the institutions participate in frequent repetitions of disaster awareness training and drills.

Keywords Public administration · Disaster management · Disaster · Disaster risk perception · Preparedness

1 Introduction

Historically, disaster management has been confined to responsive actions in response to calamities. In recent years, there has been a notable transition toward a proactive strategy for disaster management, emphasizing preparedness to mitigate the effects of disasters (Mojtahedi and Oo 2017). Formalizing disaster preparedness is the objective of the Sendai

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Framework for Disaster Risk Reduction, which establishes seven global targets and four action priorities for the period 2015–2030 (SFDRR 2015). In today's world, it is crucial to prioritize disaster preparedness due to rising global uncertainties (Murphy et al. 2021; Ghorbankhani et al. 2024). It is of utmost importance for individuals and society to prioritize disaster preparedness to safeguard themselves during times of crisis (Shah et al. 2020). Given the potential harm that disasters can inflict on societies, it is imperative to prioritize disaster preparedness as an essential requirement (Tassew et al. 2023). Preparedness is the knowledge, understanding, attitudes, and practices necessary to respond to and be prepared for an existing or potential crisis (Gowing et al. 2017; AlHarastani et al. 2021). Disaster preparedness is a continuous and integrated process in which individuals can perceive risks, plan, and take action (FEMA 2020). In this context, disaster preparedness refers to the sum of activities and measures taken in advance to ensure an effective response to hazards (Paton 2019; Dasgupta et al. 2020). Preparedness enhances individuals' ability to manage, adjust, respond, and recuperate from calamities effectively, encompassing individual and communal behavioral reactions. Effective mitigation of disaster consequences can be achieved by individuals and societies that possess sufficient levels of disaster preparedness (Lindell and Perry 2000; Han et al. 2017; Xu et al. 2018). Communities' readiness to address a crisis is compromised when they fail to implement sufficient and suitable measures (Nguyễn et al. 2023). The literature encompasses a multitude of studies on disaster preparedness (Aykan et al. 2022; Munasinghe et al. 2023; Cong et al. 2023; Nguyễn et al. 2023; Raheem et al. 2023; Wang et al. 2023; Hutton, 2023; Labrague and Hammad 2023; Tang et al. 2024; Kako, & Rao and Enelamah 2024; Hamdi et al. 2024; Ahsan et al. 2024; Ascolese et al. 2024). To comprehend the historical occurrences of disasters and develop informed and suitable policies within society, it is imperative to evaluate the risk perceptions of both people and society. Disaster risk perception throughout societies should be considered in this particular situation (Khan et al. 2020). Risk perception, as defined by Su et al. (2015), is the recognition or differentiation of potential damage or loss posed by a hazard, which influences individuals' risk-avoidance or risk-acceptance behaviors. How individuals perceive hazards is a cognitive process influenced by their prior experiences and the interplay between their social and physical surroundings (Brown 2014; Taarup-Esbensen 2019). Marshall (2020) argues that this perception may impact an individual's level of preparedness, as it shapes their attitudes, expectations regarding future impacts, and identification of hazards. Research indicates that risk perception plays a significant role in shaping individuals' disaster preparedness behaviors (Antronico et al. 2017). According to Miceli et al. (2008), risk perception is positively correlated with disaster preparedness. Risk perception significantly influences individuals' propensity to proactively prepare for potential disasters before their occurrence. The significance of risk perception in assessing the degree of risk awareness among individuals is widely acknowledged (Macea et al. 2018). A crucial function of disaster risk perception is to increase public consciousness regarding prospective dangers and the necessity for readiness. Advocating for and efficiently addressing this perception can facilitate the advancement and modification of disaster preparedness (Amaya et al. 2024).

Despite Turkey's notable advancements in disaster preparedness, disaster risk perception, and disaster loss reduction in recent years, there are still obstacles to effectively integrating preparedness awareness into a broader disaster culture. Identifying disaster preparedness and risk perceptions among academic and administrative staff at Artvin Coruh University, a public service institution that educates future professionals, is crucial for sustainable public

administration. This study assesses disaster risk perception and preparedness among Artvin Coruh University's academic and administrative staff.

1.1 Material and method

1.2 Type of research

The study employed a cross-sectional research design, which involved researching over a specific time frame and on a representative sample. This methodology exemplifies a descriptive research strategy in which the study investigates individuals' circumstances at a specific moment and seeks to establish this state of affairs.

1.3 Place and time of conducting the research

The study was conducted at Artvin Coruh University from April to July 2023.

1.4 Universe and sample

The study population comprises academic and administrative personnel employed at the university. This study did not apply a precise sampling selection procedure. However, 218 employees who were both accessible and willing to participate were included in the study. Nevertheless, several individuals provided partial responses to the questionnaires, diminishing the study's sample size to 215.

1.5 Collection of data

From April 2023 to July 2023, electronic forms were distributed to academic and administrative personnel by email and social media platforms, and data were subsequently gathered online.

1.6 Data collection instruments

In the data collection process, "The Disaster Preparedness Scale" (DPS) and "The Disaster Risk Perception Scale" (DRPS) were used together with "The Sociodemographic Characteristics Form" (SPSF).

1.6.1 Sociodemographic characteristics

Based on literature reviews, the data collection form includes information about the disaster and sociodemographic information about the participants, such as age, gender, level of schooling, and type of job.

1.6.2 Disaster preparedness scale

The DPS, created by Sentuna and Caki (2020), comprises 13 components and four subdimensions. The scale comprises several sub-dimensions, including "disaster physical protection" (question references 1, 2, 3, 4, 5), "disaster planning" (question references 6, 7, 8), "disaster relief" (question references 9, 10, 11), and "disaster warning systems" (question references 12, 13). The scale has five elements within the subdimension of "disaster physical protection," three items within the subdimension of "disaster planning," three items within the subdimension of "disaster relief," and two items within the subdimension of "disaster warning systems." The items in the scale were evaluated using a 4-point Likert format, with scores ranging from "1-Strongly No" to "4-Strongly Yes". The ratings assigned to the items were as follows: "Definitely Yes: 3.21-4.00", "Yes: 2.41–3.20", "No: 1.61–2.40", "Strongly No: 0.81–1.60", and "Strongly No: 0.81–1.60". The scale yields a minimum score of 13 and a maximum score of 52. As the score increases, there is a corresponding increase in disaster readiness. According to Sentuna and Caki (2020), the Cronbach's alpha coefficient obtained for the entire scale is 0.82. This investigation involved the calculation of the Cronbach alpha coefficient for the scale, yielding a value of 0.841.

1.6.3 Disaster risk perception scale

The DRPS, developed by Kıymış (2022), is a robust and accurate scale designed to assess disaster perception and preparedness across all types of disasters. It consists of 25 items and is structured into five dimensions: Exposure/Impact (S1-S9), Probability (S10-S12), Unmanageability (S13-S15), Worry/Fear (S16-S21), and Vulnerability (S22-S25). The scale's validity and reliability analysis confirmed its reliability. The whole scale's Cronbach alpha coefficient was determined to be 0.87, while the subdimensions had Cronbach alpha coefficients of 0.86, 0.71, 0.79, 0.77, and 0.73, respectively. This investigation yielded a Cronbach alpha coefficient of 0.910. The scale does not contain any objects that are reversed. The computation used a Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree). The scale's overall score and the sub-dimensions of individual scores can be assessed. According to Kıymış (2022), it is assessed below and above the mean.

1.7 Evaluation of the data

The data collected throughout the study were analyzed using SPSS for Windows (Version 24.0, Social Sciences Statistical Package). An analysis was conducted on the data distribution using Skewness and Kurtosis values. The Skewness and Kurtosis values were observed to fall within the range of +2.0/2.0, indicating that the data followed a normal distribution (George and Mallery 2010). The study provided descriptive statistics for continuous variables, including mean, standard deviation, and minimum and maximum values. For categorical variables, descriptive statistics were offered in terms of frequency and percentage. The Independent Sample t-test was used for paired groups in independent group comparisons, whereas the One-way ANOVA test was employed for situations involving three or more groups. The "Bonferroni correction test" was used as a post hoc test for the group difference analysis. Pearson correlation analysis was employed to determine the link between

the measurements. The acquired data were assessed at a significance level of $p < 0.05$ and a 95% confidence interval.

1.8 Ethical approval

Before the study, participants were given information on ethical approval and research ethics, and their consent was obtained. The work received ethical approval as per the conclusion of the Artvin Coruh University Scientific Research Ethics Committee on March 27, 2023, with reference number E.86,654.

2 Results

The objective of this research endeavor is to investigate the awareness and readiness of the academic and administrative personnel of Artvin Coruh University regarding disaster risk. In this regard, and in accordance with the research objective, the obtained results are described in detail below.

The distribution of sociodemographic characteristics and responses to queries regarding disasters among university personnel is displayed in Table 1. The calculated mean age of the group was 39.93 years. Among the participants, 56.3% identified as male, 74.4% reported being married, 39.1% held doctoral degrees, 67.4% were employed as academic personnel, and 23.3% were lecturers. Moreover, 54.3% of the university personnel who participated in the research lacked an administrative position, and 64.2% were unaware of the university's emergency action plans. Moreover, 94% of the respondents indicated that they were aware of the potential disasters that could occur in their area of residence.

The distribution of responses from university workers to disaster-related questions is presented in Table 2. Of the participants, 64.2% had not undergone disaster training, whereas 79.1% expressed a desire to acquire such training. In addition, 54.4% of the participants reported no prior exposure to disasters, whereas most 67.4% indicated their inclination to volunteer during such events. Among the participants, 85.6% had not encountered any loss of family members in a tragedy, while 84.7% had not suffered any material losses. In addition, 36.3% of the participants reported regularly monitoring earthquake news throughout the day, while 58.6% said that they own disaster insurance for their residential properties. Of the participants, 41.4% had never contemplated relocating because of the danger of disasters, while 66.5% had yet to undertake any measures to prepare for such events.

Table 3 presents a comparative analysis of the average total scores of sociodemographic and disaster-related features of university faculty, explicitly focusing on the DRPS and DPS. The study revealed a statistically significant association between gender and awareness of emergency action plans at the institution, and the DPS overall score ($p < 0.05$). Based on the findings, it was observed that women exhibited notably higher DPS total scores than males. Additionally, those who knew about the institution's emergency action plans showed considerably better DPS total scores than those who lacked such awareness. Nevertheless, the analysis revealed that there was no statistically significant correlation between the sociodemographic and disaster-related attributes of the university faculty and the overall score of the DRPS ($p > 0.05$).

Table 1 Distribution of sociodemographic and disaster-related characteristics of university personnel

Characteristics	Mean ± SD	Min.-Max.
Age	39,93 ± 7,26	20–74
	n	**%**
Gender		
Female	94	43,7
Male	121	56,3
Marital Status		
Married	160	74,4
Single	55	25,6
Education Status		
Primary education	3	1,4
High School	2	0,9
Associate degree	13	6
License	47	21,9
Master's Degree	66	30,7
PhD	84	39,1
Mode of Operation		
Academic Staff	145	67,4
Administrative Staff	70	32,6
Title		
Research Assistant.	25	11,6
Lecturer	50	23,3
Assistant Prof.	37	17,2
Assoc. Dr.	26	12,1
Prof. Dr.	7	3,3
Faculty, School Secretary, Head of Department, Branch Manager	11	5,1
Chief or officer	45	21,0
Permanent Worker/Support Staff	6	2,8
Security Officer	8	3,7
Administrative Position		
Yes	96	44,7
No	119	55,3
Awareness of emergency action plans at the university		
Yes	77	35,8
No	138	64,2
Do you know which disasters occur where you live?		
Yes	203	94,4
No	12	5,6

A comparison of the university personnel's replies to the disaster-related questions with the average total scores of DRPS and DPS is presented in Table 4. The study revealed a statistically significant link between the overall DRPS score and the staff's perceptions of potential disasters, material losses resulting from such disasters, and the likelihood of relocating due to disaster risk ($p < 0.05$).

A robust statistical association was observed between the DPS total score and the presence of disaster training, disaster insurance coverage for the household, and disaster preparedness ($p < 0.05$). The Bonferroni correction test was performed to identify the origin of the significant disparity between the variables. The results revealed that individuals with

Table 2 Distribution of university staff's responses to disaster-related questions

	n	%
Disaster Training Status		
Yes	77	35,8
No.	138	64,2
Willingness to Receive Disaster Training		
Yes	170	79,1
No.	45	20,9
Have you experienced any disasters?		
Yes	98	45,6
No.	117	54,4
Where do you follow the agenda for disasters?		
Written or oral media	123	57,2
Social Media	139	64,7
News Sites	156	72,6
Willingness to Volunteer in Disasters		
Yes	145	67,4
No.	70	32,6
Have you lost someone close to you in a disaster?		
Yes	31	14,4
No.	184	85,6
Have you suffered financial loss in any disaster?		
Yes	33	15,3
No.	182	84,7
How often did you follow earthquake news during the day?		
Never	2	0,9
Very little	15	7
Sometimes	46	21,4
Frequently	78	36,3
Very often	74	34,4
Does your residence have insurance?		
Yes	126	58,6
No.	29	13,5
I do not know	60	27,9
Do you plan to change location (relocation) to reduce disaster risk?		
Never ever	89	41,4
Very little	71	33
Sometimes	45	20,9
Frequently	5	2,3
Very often	5	2,3
Do You Prepare for Disasters?		
Yes	72	33,5
No.	143	66,5

*More than one response was given

Table 3 University staff sociodemographic and disaster-related features compared with DRPS and DPS total scores

Characteristics	DRPS Total	DPS Total
	Mean ± SD	Mean ± SD
Gender		
Female	130,6 ± 16,77	31,59 ± 4,69
Male	128,38 ± 15,84	29,45 ± 4,83
t/p	0,992/0,322	3,262/**0,001**
Marital Status		
Married	128,71 ± 16,44	30,71 ± 4,22
Single	131,2 ± 15,69	29,42 ± 6,36
t/p	-0,979/0,329	1,407/0,164
Education Status		
Primary education	128 ± 25,24	33,33 ± 6,66
High School	140 ± 24,04	29 ± 1,41
Associate degree	127,23 ± 16,43	29,77 ± 1,64
License	126,34 ± 16,63	30,26 ± 3,64
Master's degree	130,15 ± 17,51	29,79 ± 6,35
PhD	130,52 ± 14,68	30,94 ± 4,45
F/p	0,657/0,656	0,711/0,616
Mode of Operation		
Academic staff	130,26 ± 16,1	30,62 ± 5,2
Administrative Staff	127,47 ± 16,5	29,89 ± 4,1
t/p	1,178/0,24	1,036/0,301
Title		
Research Assistant.	135,96 ± 20,19	30,96 ± 5,38
Lecturer	129,34 ± 17,24	30,06 ± 5,92
Assistant Prof.	131,22 ± 13,25	31,11 ± 4,34
Assoc. Dr.	127,96 ± 13,3	30,62 ± 5,4
Prof. Dr.	121,29 ± 10,05	30,71 ± 2,75
Faculty, School Secretary, Head of Department, Branch Manager	122,64 ± 11,95	29,27 ± 4,88
Chief	126,9 ± 11,9	28,9 ± 6,05
Officer	127,31 ± 18,94	30,34 ± 3,56
Permanent Worker/Support Staff	129,67 ± 16,15	31,17 ± 4,88
Security Officer	132,63 ± 17,23	29,13 ± 1,55
F/p	1,061/0,394	0,397/0,936
Status of the Administrative Position		
Yes	129,61 ± 13,95	30,29 ± 4,56
No.	129,13 ± 17,94	30,45 ± 5,13
t/p	0,221/0,826	-0,242/0,809
Awareness of emergency action plans at the university		
Yes	130,35 ± 15,1	31,36 ± 5,64
No.	128,79 ± 16,88	29,83 ± 4,32
t/p	0,674/0,501	2,067/**0,041**

$p < 0,05$, t: Independent Sample t-test, F: One-Way ANOVA

Table 4 Comparison of university staff disaster reactions with DRPS and DPS overall mean scores

	DRPS Total	DPS Total
	Mean ± SD	Mean ± SD
Disaster Training Status		
Yes	130,45 ± 17,54	31,94 ± 5,1
No.	128,73 ± 15,51	29,51 ± 4,54
t/p	0,745/0,457	3,586/**<0,001**
Have you experienced any disasters?		
Yes	132,41 ± 16,2	30,9 ± 4,88
No.	126,79 ± 15,91	29,95 ± 4,85
t/p	2,559/**0,011**	1,425/0,156
Willingness to Volunteer in Disasters		
Yes	130,11 ± 15,79	30,34 ± 5,24
No.	127,77 ± 17,17	30,47 ± 4,05
t/p	0,989/0,324	-0,188/0,851
Have you lost someone close to you in a disaster?		
Yes	133,1 ± 13,54	31,55 ± 4,13
No.	128,72 ± 16,61	30,18 ± 4,97
t/p	1,391/0,166	1,444/0,15
Have you suffered any financial loss in a disaster?		
Yes	138,7 ± 18,46	31,64 ± 5,3
No.	127,65 ± 15,27	30,15 ± 4,77
t/p	3,697/**<0,001**	1,613/0,108
Does the house you live in have disaster insurance?		
Yes[1]	128,6 ± 17,39	31,4 ± 4,79
No[2]	130,41 ± 16,56	29,41 ± 3,15
I don't know [3]	130,4 ± 13,56	28,7 ± 5,23
F/p	0,318/0,728	7,324/**0,001**, **1 > 3**
Do you plan to change location (relocation) to reduce disaster risk?		
Never [1]	123,79 ± 15,73	129,35 ± 16,25
Very little [2]	129,28 ± 14,11	30,15 ± 5,36
Sometimes [3]	137,8 ± 14,16	30,44 ± 4,08
Frequently [4]	129 ± 20,52	30,29 ± 5,03
Very often [5]	153,6 ± 18,65	32,8 ± 3,7
F/p	9,827/**<0,001**, **3 > 1**, **3 > 2**,**5 > 1**,**5 > 2**	0,535/0,71
Do You Prepare for Disasters?		
Yes	131 ± 16,96	33,72 ± 5,01
No	128,52 ± 15,87	28,7 ± 3,84
t/p	1,058/0,291	8,146/**<0,001**

$p < 0.05$, t: Independent Sample t-test, F: One-Way ANOVA

disaster insurance had significantly higher DPS scores than those without disaster insurance. Additionally, individuals who occasionally and frequently considered relocation for disaster risk had significantly higher DRPS scores than those who never and rarely considered relocation. Furthermore, individuals who underwent disaster training exhibited notably elevated DPS scores compared with those who did not receive such training.

Similarly, individuals with adequate preparation for disasters demonstrated significantly higher DPS scores than those without. Additionally, individuals who encountered any disas-

Table 5 Relationship between DRPS and DPS total scores and age of university staff

		DRPS Total	DPS Total	Age
DRPS Total	rp	1	-0,031	-0,241
	p		0,656	**<0,001**
DPS Total	rp	-0,031	1	-0,204
	p	0,656		**0,003**
Age	rp	-0,241	-0,204	
	p	**<0,001**	**0,003**	

$p<0.05$, rp: Pearson Correlation Test

ter demonstrated significantly higher DRPS scores than those who did not. Furthermore, individuals who experienced material loss in any disaster exhibited significantly higher DRPS scores than those who did not.

Table 5 presents the correlation between university personnel's DRPS and DPS values and their respective age groups. Because of the conducted study, it was determined that there exists no statistically significant correlation between the total score of DRPS and the total score of DPS ($p>0.05$). In contrast, a statistically significant correlation was observed between age and DRPS and DPS total scores, with a negative connection ($p<0.05$). In this particular instance, it was noted that there exists a negative correlation between age and both disaster risk perception and disaster preparedness level.

3 Discussions

The occurrence of disasters in Turkey at different times has led to the loss of life and property, indicating that citizens' perceptions and readiness for disaster risk are insufficient (Taşkıran and Baykal 2017). Individuals often begin implementing disaster preparedness measures when they become aware of the imminent danger of a disaster (Lazo et al. 2015).

This study revealed a statistically significant correlation between the gender of the staff and their level of knowledge of emergency action plans at the university, as well as the combined DPS score. The results indicate that women exhibited notably higher DPS total scores than males. In addition, those who knew about the institution's emergency action plans showed considerably better DPS total scores than those who lacked such awareness. Aran and Erol (2022) conducted research that revealed a notable disparity among participants regarding gender and understanding of emergency response plans. Men had higher average scores than women in terms of awareness of emergency response plans. Parlak (2019) conducted a study that revealed that women outperformed males in assessing emergency action plans. Additionally, 51.5% of the participants needed to be made aware of their responsibilities in emergency plans. According to a survey by İytemür (2020), most participants demonstrated awareness of the organizational disaster plan.

Turkey has officially designated 2021 as the "disaster training year" and 2022 as the "disaster simulation year." During these time intervals, it has been noted that there is a rise in the level of disaster preparedness among the staff. According to the disaster risk profile of Artvin province, where Artvin Coruh University is situated, staff members receive monthly in-service training on disaster awareness (IRAP, 2021). Consequently, there is a notable enhancement in the staff's understanding of emergency action plans, resulting in elevated disaster readiness. According to existing research, there is a correlation between the level of disaster readiness exhibited by female staff members compared with their male counterparts

and factors such as job description, sense of duty, and organizational commitment. Personnel who possess knowledge of emergency action plans are advised to cultivate awareness of disaster hazards and disaster preparedness. Furthermore, the seismic events that transpired in Turkey on February 6, 2023, are believed to influence individuals' sense of disaster risk and their level of preparation.

This study revealed a statistically significant disparity between the overall score of the DRPS and the personnel's level of exposure to disasters, the occurrence of material loss in disasters, and the consideration of relocation as a risk factor for disasters. Prior research also demonstrated comparable findings. Tercan (2023) conducted a study that demonstrated a noteworthy correlation between disaster experience and the perception of disaster risk. Xu et al. (2019) revealed no statistically significant association between financial readiness and disaster risk perception. Nevertheless, it was asserted that as the magnitude of the disaster encounter escalates, the perceived magnitude of the disaster also escalates. According to Maidl et al. (2019), the public should exhibit better risk awareness and readiness.

The Artvin province's Provincial Risk Mitigation Plan identifies many threats, including floods, landslides, rock falls, and fires. Artvin has witnessed instances of flood disasters on several occasions in previous occurrences (IRAP, 2021). This condition indicates that the personnel continuously has a high and open sense of disaster risk. The impression of high disaster risk may be influenced by the experiences or observations of university workers about emergencies.

In this study, a statistically significant difference was found between the DPS total score and the status of receiving disaster training, having disaster insurance for the house of residence, and having prepared for disasters. Studies conducted in the literature also reveal similar results. A study by Gerdan (2014) stated that having disaster insurance has a significant relationship with the level of awareness. A study conducted by Ağahan and Demirbilek (2023) found that the disaster preparedness of participants who received disaster training beforehand was higher than that of those who did not. In a study conducted by Miceli et al. (2008), it was found that residents' disaster preparedness behaviors (including purchasing insurance) were not related to their risk perception probability of flood disaster occurrence but were significantly related to the severity of the disaster.

Disaster training in Artvin Province is conducted periodically through institutional cooperation, and during the training sessions conducted for the personnel of Artvin Coruh University, the Artvin Provincial Disaster and Emergency Directorate (AFAD) also issued emergency and disaster bags. These bags can enhance individuals' disaster readiness. Furthermore, it is approximated that the staff own disaster insurance to mitigate financial losses by considering the prevailing disaster hazards in their residential areas.

This study revealed that those with disaster insurance exhibited notably elevated DPS scores compared with those without such coverage. Furthermore, individuals who occasionally and frequently contemplate migration to mitigate disaster risk exhibit notably elevated DRPS scores compared with those who never contemplate relocation. These findings are further corroborated in the existing body of research. Bateman and Edwards (2002) conducted a study that revealed that women have a higher propensity for evacuation due to gender norms and dynamics. Xu et al. (2018) found a strong positive correlation between citizens' insurance purchase behavior and disaster risk. According to Lu et al. (2018), more than 80% of respondents had a statistically significant inclination toward implementing changes.

The disastrous risk perceptions of the workers at Artvin Coruh University are believed to be influenced by the disaster and emergency occurrences they encounter in their everyday lives. Within this particular context, individuals who possess a heightened awareness of disaster risk tend to contemplate relocating to secure settlements to safeguard themselves against potential disasters and emergency situations. This scenario heightens the personnel's awareness of disaster and emergency risks, prompting them to contemplate transfer.

This study found that those who underwent disaster training had substantially higher levels of readiness for disasters and DPS scores than those who did not receive such training. Furthermore, it was determined that those who encountered a disaster or suffered material detriment in any disaster had notably elevated DRPS scores compared with those who did not encounter such occurrences.

Aykan et al. (2022) conducted research that revealed a statistically significant association between the level of disaster readiness among individuals who underwent disaster training. The study revealed that the participants' levels of disaster readiness was 3.571 times greater than that of individuals who did not receive training. Rizqillah and Suna (2018) revealed that disaster training enhanced participants' readiness to handle disasters. According to a study by Han and Wu (2024), a negative and statistically significant association between individuals who have experienced natural disasters and their readiness for such events. Huang et al. (2022) conducted a study that revealed that individuals with prior exposure to disasters exhibited elevated levels of risk perception. The study conducted by Kirby-Straker and Straker (2023) revealed a significant correlation between material loss experienced following a natural disasters and individuals' preparatory actions.

Personnel affiliated with Artvin Coruh University must undergo disaster training and engage in disaster preparedness measures in response to prevailing hazards within their respective provinces. The occurrence of disasters and economic losses heightens the perception of disaster risk because individuals directly encounter such events and incur financial losses.

This study found a significant relationship between age and DRPS and DPS total scores in the opposite direction. It was observed that as age increases, disaster risk perception and disaster preparedness levels decrease.

The study conducted by Akbar et al. (2020) revealed a favorable correlation between disaster risk perception and disaster preparation. The impact of age on risk perception was examined in a study conducted by Mills et al. (2016). Bodas et al. (2022) conducted a study that revealed that the older population had a decreased risk perception compared with young individuals. Shah et al. (2022) found that those above the age of 40 years and with a high sense of disaster risk had a distinct variation in their assessment of disaster risk. According to Al-Rousan et al. (2014), a negative correlation was observed between the participants' ages and their disaster readiness score.

With the increasing age of Artvin Coruh University personnel, a high level of disaster experience decreases disaster risk perception and preparedness. The fact that elderly personnel develop habits or do not care about the disaster situation may affect their disaster risk perception and preparedness.

4 Conclusion

This study investigated the correlations between the perception of disaster risk and the degrees of disaster readiness among the personnel of Artvin Coruh University, as well as the influence of several demographic and disaster preparedness characteristics. The study's findings indicate a statistically significant correlation between gender and awareness of emergency action plans at the institution, and the DPS overall score. This finding demonstrates that those who possess knowledge of emergency action plans, particularly women and staff, exhibit notably elevated readiness for disasters.

Furthermore, a statistically significant correlation was established between the DRPS total score and the occurrence of personal disaster loss and contemplation of migration due to disaster risk. The data above demonstrate a significant correlation between individuals' encounters with disasters, the resulting economic losses, and their sense of disaster risk.

Conversely, a statistically significant correlation was observed between the DPS total score and the presence of disaster training, possession of disaster insurance for the residential dwelling, and engagement in disaster-oriented preparedness. The findings of this study suggest that those who have undergone disaster training, have disaster insurance, and demonstrate disaster readiness exhibit a greater degree of disaster preparedness.

In conclusion, an investigation was conducted to explore the correlation between the age of university staff and the DRPS and DPS total scores. However, the analysis did not yield any statistically significant findings. These findings indicate that age does not directly influence the perception of hazards and readiness for disasters.

The aforementioned findings underscore the wide range of factors that influence the perception of disaster risk and the levels of preparedness among Artvin Coruh University personnel. They highlight the importance of considering these factors when developing disaster management policies and developing disaster preparedness programs.

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Data availability Data will be made available on request.

Declarations

Competing interests We declare that there are no potential conflicts of interest in this research.

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