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Developing An Individual Disaster Preparedness Scale For Teachers

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Abstract

This study aimed to contribute to disaster research and educational security planning by developing a scale that assesses teachers' individual disaster preparedness. After the 38-item pool formed by the deductive method was subjected to surface and content validity, a draft questionnaire form was created with the remaining 35 items and tested with a pilot study. For the validity and reliability analyses of the scale, a questionnaire was administered to 726 participants, who were determined by convenience sampling method from permanent status teachers working in public schools providing primary and secondary education in two provinces (Bayburt and Gümüşhane) located in the north-east of Turkey, by face-to-face interview method. As a result of the exploratory factor analysis conducted for construct validity, seven factors with eigenvalues above 1, explaining 69.117% of the total variance, were identified. Confirmatory factor analysis was performed to verify the structure, and at this stage, nine items were removed from the scale, and analysis was performed again. General goodness of fit values: $\chi^2/sd=3.063$, GFI=0.919, AGFI =0.897, CFI=0.950, NFI=0.928 and RMSEA=0.053. Standardized factor loadings ranged between 0.541 and 0.999. The overall Alpha value of the scale is 0.865. As a result of the master validity test, it was determined that the scale met the convergent and divergent validity conditions. The final version of the scale was a psychometrically appropriate measurement tool for the teachers in the sample.

Keywords: Disaster preparedness scale, Teachers, Validity, Reliability.

1. Introduction

Disasters are events that severely disrupt the daily life of a community beyond its ability to cope with its resources. Disasters can be caused by natural or human activities (IFRC, 2024). According to FEMA (2013), a disaster is a large-scale event that causes property damage, death, and/or injury to a community and disrupts life.

The consequences of disasters can be considered short-term and long-term. Short-term consequences of disasters include death, injury, loss of property, loss of land, damage to infrastructure, collapse of buildings, and social unrest. Long-term consequences include demographic changes, migration, deterioration of the general economy, social unrest, and social collapse (Van Bavel et al., 2020).

Turkey is geographically located on a land that is prone to natural disasters. Due to the structure of this geography, there are many different disasters, such as earthquakes, landslides, floods, rock falls, and avalanches (AFAD, 2018). In 2023, two major earthquakes centered in Kahramanmaraş caused massive

destruction in Adana, Adıyaman, Diyarbakır, Elâzığ, Gaziantep, Hatay, Kilis, Malatya, Osmaniye, and Şanlıurfa, killing 53,537 people and injuring 107,213. The Kahramanmaraş earthquakes affected the lives of more than 14 million people and caused irreparable damage to infrastructure, economy, social life, and public administration (TBB, 2024).

As a result, disasters can have human, material, economic, and environmental consequences worldwide, depending on their severity and content (WHO, 2017). In order to minimize the harmful effects of disasters, carrying out preparatory activities before disasters occur will increase the chances of success of the activities that need to be carried out after the disaster (Lee et al., 2023). Disaster preparedness refers to all proactive planning and activities that are carried out before disasters occur (Lee et al., 2021). In other words, disaster preparedness is a set of knowledge and skills to accurately predict, respond to, and minimize the impact of disasters before they occur. Disaster preparedness activities are carried out by states, institutions and organizations, society, and individuals (Osman & Altıntaş, 2023). Although it is the responsibility of the public to manage general and significant risks in terms of disaster risk, society and individuals also have important roles (Kohler, 2020; Baack & Alfred, 2013). As a result of disaster preparedness activities, an effective and timely response can be provided, and the damage caused by disasters can be minimized (Bhebhe et al., 2019). Disaster preparedness aims to minimize the possible loss of life and property during and after the disaster and to return the society to its former functioning as soon as possible (Adams et al., 2019).

As countries and societies prepare for disasters, individuals should also prepare for disasters. Individuals individually prepared for disasters can better cope with disasters' physical and psychological effects. Such individuals contribute to increasing societal resilience (Lindell, 2013). Individual preparedness for disasters varies according to people's beliefs about disasters, their perspectives, their backgrounds, the hazards they face, and the conditions they are in (Adams et al., 2019). The public should help individuals by providing accurate information about disasters and what to do before, during, and after a disaster. In this way, individual disaster preparedness can be adequately fulfilled.

There are some groups whose safety and livelihoods are at risk during disasters. These groups include the elderly, the disabled, children, infants, pregnant women, and migrants. Among these groups, infants and children are the most vulnerable. Infants and children cannot help themselves (Gausche-Hill, 2009). Disasters affect children physically, psychologically, and socially (Elangovan & Kasi, 2015). Children spend most of their time in school. Therefore, the environment should be safer than other places for children, who are one of the most vulnerable groups during disasters. In addition, schools are also important as places where children can be educated and involved in practical activities in the context of disasters (Lam et al., 2018). Disaster risks are naturally present in schools. The significance of these risks increases, especially when they interact with physical, social, economic, and environmental vulnerabilities (UNISDR, 2005). Schools are most vulnerable because they are one of the places where children live, often have not participated in or been trained in disaster evacuation drills, are prone to panic, and are challenging to manage in emergencies (Widowati et al., 2021). Schools should be prepared for disasters. This is the responsibility of both school management and teachers. Disaster preparedness will improve the disaster response capacity of schools (Das & Malaviya, 2013; Kawasaki et al., 2022). In the context of individual disaster preparedness, teachers' knowledge and experience about disasters are essential for the safety of children in schools during disasters. However, disaster preparedness in schools is usually addressed in the context of management (Salita et al., 2021).

Disaster preparedness activities should be based on performance and knowledge of the potential impacts of disaster hazards on health and safety (Fatoni et al., 2022). Most of the tools related to disaster preparedness measurements are based on a pre-disaster process. Activities and measures to be taken before a disaster are relative. This is because there is no absolute readiness for disasters, and a level of determination is carried out compared to others or previous performance (Şentuna & Çakı, 2020).

Although disaster preparedness is recognized as a critical competency for teachers, especially in the context of increasing disaster risks globally, a significant gap in measurement tools specifically addresses individual disaster preparedness among educators. Existing tools primarily focus on overall school disaster management or organizational preparedness rather than capturing teachers' preparedness (e.g., Widowati et al., 2021; Wang & Tsai, 2022; Khusnani et al., 2023). Although some studies have examined teacher beliefs, awareness, and attitudes toward disaster risk reduction (e.g., Sonmez and Gokmenoglu, 2023; Dikmenli et al., 2018; Dinç & Saraç, 2024; Uhm and Oh, 2018), they do not provide a comprehensive psychometric tool designed to assess individual-level preparedness behaviors, knowledge, and abilities. Furthermore, the disaster preparedness scales developed by Kumar and Nair (2018), Rohith et al. (2018), and Najafi et al. (2020) are for the general population. They may not fully reflect the unique responsibilities and situational factors affecting teachers. Given the central role educators play in ensuring students' safety during and after disasters, there is a critical need for a valid and reliable tool that assesses their preparedness. The lack of such a tool limits our ability to identify gaps, develop targeted interventions, and ultimately build more resilient educational communities. Therefore, this study aims to develop a psychometric scale that assesses teachers' individual disaster preparedness and contributes to disaster research and educational security planning.

2. Methods

2.1. Sample and data collection

The study sample was selected from permanent teachers working in public primary and secondary schools in two provinces (Bayburt and Gümüşhane) in the northeast of Turkey. The research population is 2746 teachers as of 2023 (Bayburt: 1132, Gümüşhane: 1614). The method of determining the research sample is convenience sampling, a non-random sampling method. In selecting the sample, the inclusion criteria were a teacher with permanent status in the above-mentioned schools and a volunteer. The face-to-face interview method was used. The questionnaires were administered between 15/01/2023 and 15/05/2023. In total, 742 participants were reached. Sixteen questionnaires obtained from the participants were not included in the analysis because there were too many missing markings, and they were filled in randomly. Therefore, the total number of participants included in the analysis was 726. The number of items used in the study was 35, and the number of participants was slightly more than 20 times the number of items. This ratio indicates that the required ratio (5%-20%) for multivariate statistics is met (DeVellis & Thorpe, 2012).

The research questionnaire consisted of two parts. The first part included questions to determine the demographic characteristics of the participants, while the second part included questions to determine the disaster preparedness of the teachers.

2.2. Analysis methods used

SPSS v.21 (Statistical Package for the Social Sciences) and AMOS v.22 (Analysis of Moment Structures) programs were preferred for conducting research statistics. The statistical methods used for the research analyses were content validity ratio (CVR), distribution statistics (mean, standard deviation, skewness, and kurtosis), exploratory factor analysis (EFA), confirmatory factor analysis (CFA), composite reliability (CR), average variance extracted (AVE), maximum shared variance (MSV), maximum reliability (MaxR(H)), and Cronbach alpha (α), item-total statistics, test-retest (Pearson correlation). The confidence interval in the analyses was set at 95%. A maximum of 5% missing data per questionnaire was allowed to be included in the analysis.

3. Results

3.1. Participant characteristics

Of the participants in the study, 49.3% were male and 50.7% were female. 34.9% of the participants were between the ages of 18-30, 36.8% between the ages of 31-40, 16.6% between the ages of 41-50, and 11.7% between the ages of 51-65. When the participants' marital status was examined, 72.6% were married, and

27.4% were unmarried. The educational status of the participants was 87.2% for bachelor's degrees, 11.2% for master's degrees, and 1.6% for doctorate degrees. The places of duty of the participants were 46.7% primary school and 53.3% secondary school.

3.2. Findings related to the scale development process

In this study, the scale development process of DeVellis and Thorpe (2012) was followed as the scale development process. Firstly, the literature on disaster preparedness, the scope of disaster preparedness, and disaster preparedness activities in educational institutions was reviewed. In the literature, studies focus on general school disaster management or institutional preparedness, examining teachers' beliefs, awareness, and attitudes regarding disaster preparedness. Besides this, disaster preparedness scales were developed for the general population. However, no study designed to evaluate teachers' individual preparedness behaviors, knowledge, and abilities was found. In the second stage, the item pool creation stage was started. The deductive method was used in this stage, and 38 items were created due to the literature review. While creating the item pool, academicians and experts in the field were consulted to determine whether the items were understandable, easy to read, and answerable, as well as the length of the items for surface validity. Partial corrections were made to the wording of some of the items. In the stage of determining the measurement method, since the personal perceptions of the participants will be measured and their level of agreement with the items prepared in the form of a statement will be asked, a 5-point Likert scale was preferred.

For the content validity test, Lawshe's (1975) content validity ratio (CVR) and index (CVI) methods were used. At this stage, six academicians in emergency aid and disaster management, one psychologist, and one sociologist participated. The CVR ratio and index lower value for eight people was 0.750, and 35 out of 38 items exceeded this rate. However, the CVI value showing the validity rate of the entire scale was determined as 0.798. During the academic expert evaluation stage of the scale development, a draft survey form was presented to 3 academicians who were experts in emergency aid and disaster management, and they were asked to evaluate the survey in terms of scope, content, appearance, and language. As a result of the open-ended evaluations of the academicians, some expression corrections were made in the survey. In the final stage of the scale development, the researchers applied a face-to-face survey of 40 teachers who were determined from the research universe by the convenience sampling method. The pilot study was used to pre-test the survey application, data collection, and analysis processes and to identify items not understood or misunderstood by the participants. As a result of the pilot test, only one item was changed in its wording. The average survey completion time was determined to be 6 minutes. In addition, the scale was translated into English by two academics working in English language and literature, independently of each other, for use in the article. Later, the same two academics came together and combined the two different translations into a single translation in a coordinated manner. The research team also evaluated the translation in terms of conceptual equivalence.

3.3. Findings on the validity and reliability of the scale

In the study, EFA was first performed to assess construct validity. In EFA, the direct oblimin method was preferred for data extraction from the principal component analysis and oblique rotation methods. The Kaiser-Meyer-Olkin Measure of Sampling Adequacy value was determined as 0.879, and the Bartlett's Test of Sphericity value was determined as 17990.847 (df: 595; p: 0.000). Communalities values varied between 0.532-0.956. Seven factors with eigenvalues above 1 were determined. Factors were: disaster risk knowledge and awareness (DRKA), emergency response skills (ERS), psychological preparation and support (PRS), school-community cooperation (SCC), curriculum integration (CI), digital preparation (DP), and inclusive preparation (IP). These seven factors explained 69.117% of the total variance. When the Pattern Matrix was examined, it was seen that the values of the items under each factor varied between 0.515-0.988. At this stage, the reliability of the tested sample's structural validity was also examined. For this, Cronbach alpha (α) and item-total statistics values were examined. The general α value of the scale

was found to be 0.904. When the Cronbach alpha if item deleted values were examined, it was seen that these values varied between 0.898-0.904. The item-total values were between 0.238-0.630 (Table 1)

Table 1. Factor loadings, items descriptive statistics and reliability statistics

Items	**Descriptive**		**Factors and factor loadings**									
	M	**SD**	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**h^2**	**I-T**	**α**
DRKA1	2.42	1.30	**.617**	.045	.087	.160	.011	.016	.238	.664	.630	.897
DRKA2	2.10	1.16	**.643**	.015	.093	.097	.018	.108	.147	.650	.606	.897
DRKA3	1.86	1.13	**.849**	.035	.028	.031	.031	.019	.005	.724	.574	.898
DRKA4	1.75	1.10	**.712**	.009	.013	.019	.050	.162	.127	.697	.589	.898
DRKA5	1.78	1.01	**.726**	.016	.069	.046	.126	.027	.042	.602	.532	.899
DRKA6	2.07	1.23	**.753**	.053	.068	.039	.015	.068	.020	.561	.477	.899
ERS1	1.70	1.00	.372	.023	.074	.013	.061	**.515**	.001	.618	.561	.898
ERS2	1.59	.946	.218	.050	.065	.050	.066	**.590**	.079	.637	.557	.899
ERS3	1.91	1.02	.033	.032	.122	.001	.099	**.648**	.192	.608	.484	.899
ERS4	1.63	.997	.087	.073	.015	.038	.051	**.770**	.072	.650	.426	.900
ERS5	2.03	.871	.134	.054	.067	.024	.059	**.783**	.034	.564	.316	.902
PRS1	1.78	1.04	.053	.021	.031	.032	**.812**	.056	.068	.655	.368	.901
PRS2	1.84	1.07	.043	.021	.091	.077	**.635**	.005	.138	.570	.506	.899
PRS3	1.65	1.01	.036	.030	.014	.056	**.892**	.037	.009	.765	.355	.901
PRS4	1.75	1.09	.081	.018	.013	.027	**.858**	.008	.044	.724	.385	.901
PRS5	2.22	1.24	.101	.006	.085	.079	**.666**	.149	.045	.549	.464	.900
SCC1	2.05	1.09	.272	.045	.053	.035	.038	.035	**.704**	.695	.536	.899
SCC2	1.97	1.10	.001	.027	.024	.044	.024	.010	**.789**	.637	.463	.900
SCC3	1.73	.991	.015	.032	.047	.010	.045	.215	**.719**	.716	.552	.898
SCC4	1.59	.860	.046	.005	.109	.046	.055	.014	**.668**	.575	.513	.899
CI1	1.47	.826	.016	.006	**.706**	.068	.062	.029	.102	.587	.359	.901
CI2	1.63	1.04	.035	.047	**.786**	.033	.009	.094	.063	.603	.243	.904
CI3	1.32	.757	.012	.003	**.683**	.044	.074	.079	.014	.532	.319	.902
CI4	1.45	.939	.053	.002	**.855**	.006	.097	.096	.081	.707	.262	.902
CI5	1.32	.756	.057	.070	**.697**	.031	.094	.057	.270	.648	.373	.901
DP1	2.48	1.20	.005	.017	.024	**.979**	.015	.004	.008	.941	.529	.898
DP2	2.56	1.06	.028	.130	.009	**.833**	.017	.012	.077	.763	.461	.900
DP3	2.43	1.17	.035	.087	.017	**.938**	.020	.033	.032	.845	.505	.899
DP4	2.52	1.16	.013	.048	.011	**.943**	.003	.009	.014	.916	.543	.898
DP5	2.47	1.23	.013	.007	.039	**.917**	.002	.026	.017	.836	.504	.899
IP1	2.80	1.26	.006	**.988**	.021	.041	.006	.016	.023	.956	.299	.903
IP2	2.95	1.41	.043	**.721**	.072	.142	.032	.065	.096	.623	.299	.903
IP3	2.62	1.25	.064	**.849**	.037	.009	.027	.053	.028	.731	.342	.902
IP4	2.70	1.27	.000	**.909**	.010	.014	.038	.009	.004	.837	.302	.903
IP5	2.66	1.35	.008	**.914**	.026	.060	.034	.020	.063	.805	.238	.904
Eigenvalue			9.057	5.203	2.915	2.599	1.898	1.293	1.226			
Variance Explained (%)			25.876	14.865	8.328	7.427	5.423	3.695	3.502			
Total Variance (%)			69.117									

h^2: Communality, I-T: Item-total correlations, α: Cronbach alpha if item deleted, DRKA: Disaster risk knowledge and awareness, ERS: Emergency response skills, PRS: Psychological preparation and support,

SCC: School-community cooperation, CI: Curriculum integration, DP: Digital preparation, IP: Inclusive preparation

In the study, CFA analysis was performed after EFA to ensure the scale's construct validity. In the CFA analysis, items ERS3, ERS5, IP1, DRKA1, DRKA2, SCC4, PRS5, DP3, and CI5, which were below 0.50-factor loading and were related to different factors and decreased the goodness of fit values of the model, were removed from the analysis and CFA analysis was repeated. The results of the second CFA analysis showed acceptable values regarding both general goodness of fit values and factor loadings. General fit indices were: χ^2/sd (Chi-Square Statistic)=3.063, GFI (Goodness of Fit Index)=0.919, AGFI (Adjusted Goodness of Fit Index)=0.897, CFI (Comparative Fit Index)=0.950, NFI (Normed Fit Index)=0.928, RMSEA (Mean Square Root of Approximation Error)=0.053. When the standardized factor loadings are examined, it is determined that they vary between 0.541 and 0.999 (Table 2). The AMOS output of the CFA model results is shown in Figure 1.

At the end of the CFA analysis, the Cronbach alpha test was performed to determine the internal consistency of the factors with the remaining items. The alpha values of the factors are: DRKA=0.832, ERS=0.816, PRS=0.847, SCC=0.794, CI=0.786, DP=0.951, IP=0.882. The overall Alpha value was determined as 0.865.

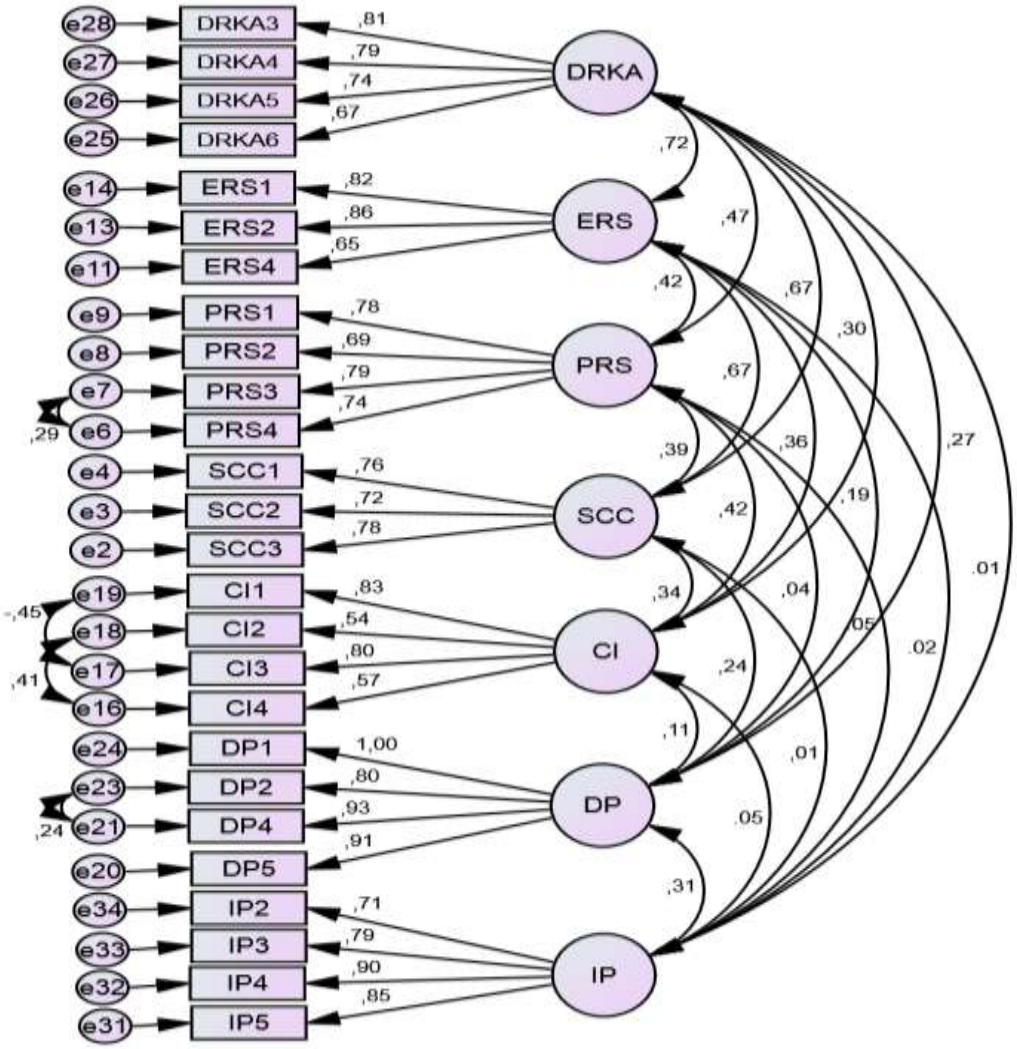

Fig. 1. Factor structure and AMOS Output

Table 2. Regression weights of CFA results

			Estimate	Std. Estimate	S.E.	C.R.	P
DRKA3	**<--**	**DRKA**	1.108	.805	.061	18.087	***
DRKA4	**<--**	**DRKA**	1.054	.786	.059	17.769	***
DRKA5	**<--**	**DRKA**	.917	.739	.054	16.944	***
DRKA6	**<--**	**DRKA**	1.000	.665	-	-	-
ERS1	**<--**	**ERS**	1.280	.820	.072	17.702	***
ERS2	**<--**	**ERS**	1.266	.862	.070	18.112	***
ERS4	**<--**	**ERS**	1.000	.646	-	-	-
PRS1	**<--**	**PRS**	1.004	.781	.058	17.455	***
PRS2	**<--**	**PRS**	.916	.693	.056	16.222	***
PRS3	**<--**	**PRS**	.986	.789	.043	23.130	***
PRS4	**<--**	**PRS**	1.000	.744	-	-	-
SCC1	**<--**	**SCC**	1.000	.756	-	-	-
SCC2	**<--**	**SCC**	.960	.717	.055	17.479	***
SCC3	**<--**	**SCC**	.931	.776	.050	18.558	***
CI1	**<--**	**CI**	1.000	.831	-	-	-
CI2	**<--**	**CI**	.822	.541	.096	8.549	***
CI3	**<--**	**CI**	.883	.801	.058	15.307	***
CI4	**<--**	**CI**	.773	.565	.089	8.690	***
DP1	**<--**	**DP**	1.000	.999	-	-	-
DP2	**<--**	**DP**	.706	.801	.020	34.963	***
DP4	**<--**	**DP**	.895	.926	.015	60.325	***
DP5	**<--**	**DP**	.936	.909	.017	54.520	***

IP2	**<---**	**IP**	1.000	.708	-	-	-
IP3	**<---**	**IP**	.995	.789	.050	19.901	***
IP4	**<---**	**IP**	1.145	.898	.052	22.135	***
IP5	**<---**	**IP**	1.147	.848	.054	21.259	***

***p<0.01

When Table 3 is examined, it is seen that CR values are greater than 0.70, AVE values are greater than 0.50 (excluding CI), and CR values are greater than the relevant AVE values. Therefore, convergent validity is provided. In Table 3, it is also determined that the correlation values of each factor with other factors are lower than the square root value of the AVE of the relevant factor (Values in bold on the diagonal), its MSV is smaller than its AVE, and the MaxR(H) value is higher than the CR value. Therefore, divergent validity is provided.

Table 3. Master Validity

	CR	**AVE**	**MSV**	**MaxR(H)**	**SCC**	**PRS**	**ERS**	**CI**	**DP**	**DRKA**	**IP**
SCC	0,794	0,562	0,454	0,796	**0,750**						
PRS	0,839	0,566	0,217	0,843	0,385*	**0,753**					
ERS	0,823	0,611	0,521	0,850	0,674*	0,420*	**0,782**				
CI	0,785	0,486	0,180	0,831	0,339*	0,424*	0,361*	**0,697**			
DP	0,951	0,831	0,098	0,997	0,238*	0,045	0,193*	0,115*	**0,911**		
DRKA	0,837	0,564	0,521	0,845	0,670*	0,466*	0,722*	0,297*	0,267*	**0,751**	
IP	0,886	0,662	0,098	0,904	0,009	0,052	0,016	0,045	0,312*	0,008	**0.814**

* p < 0.01

4. Discussion

This study aimed to develop a psychometric scale that assesses teachers' disaster preparedness and contributes to disaster research and educational security planning. For this purpose, an item pool was created using the deductive method, and a draft survey form was prepared using the scale development processes. The first draft survey form included 38 items, and at the end of the scale development process, the final draft survey form included 35 items. The final draft form was evaluated within the scope of a pilot study on 40 teachers selected by convenience sampling.

In the validity and reliability analyses of the scale, EFA was first performed, and seven factors with eigenvalues above 1 were identified. The factors were disaster risk knowledge and awareness, emergency response skills, psychological preparation and support, school-community cooperation, curriculum integration, digital preparation, and inclusive preparation. After EFA, CFA analysis was performed to evaluate structural validity. As a result of the CFA analysis, nine items were removed from the analysis, and 26 items remained on the scale. The Cronbach alpha test performed to determine the scale's internal

consistency was found to be above the critical values. As a result of the Master Validity test conducted for the convergent and divergent validity of the scale, it was determined that the scale was valid in both respects.

This study has some limitations. 726 out of 2746 teachers working in public schools (primary and secondary education) in only two provinces in Turkey were reached. The convenience sampling method, one of the non-random sampling methods, was used in the sample selection. Therefore, the research results cannot be generalized. This study is a cross-sectional study. Therefore, it needs to be supported by longitudinal studies. The developed scale should be compared with other similar and different scales.

5. Conclusion

This study developed a scale to evaluate teachers' individual disaster preparedness, which is not available in the literature and is vital for disaster risk assessment. The validity and reliability tests of the scale have yielded positive results. With this scale, teachers' preparedness in disasters can be assessed, deficiencies can be determined, and harmful consequences can be minimized by taking precautions before an earthquake with a proactive approach.

Author Contributions:

Öznur Çınar: Conceptualization, Methodology, Software, Validation, Formal analysis, Investigation, Writing – original draft, Visualization.

Emel Yıldız: Conceptualization, Methodology, Formal analysis, Writing – review &editing, Supervision.

Ekrem Cengiz: Conceptualization, Methodology, Formal analysis, Writing – review &editing.

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Data Availability Statement: Data available in publicly accessible repository

Conflicts of Interest: There is no conflict of interest/relationship with any person and/or institu-tion within the scope of the research.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

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APPENDIX A

TEACHERS' DISASTER PREPAREDNESS SCALE

A. Disaster Risk Knowledge and Awareness

1. I regularly follow meteorology and early warning systems.
2. I am knowledgeable about modern disaster risks such as pandemics/cyber attacks.
3. I know the risky areas around the school (high voltage lines, gas lines, etc.).
4. I know the location of the school's disaster assembly area and alternative routes.

B. Emergency Response Skills

5. I can perform basic first aid.
6. I can use firefighting equipment.
7. I know special evacuation procedures for students with disabilities during a disaster.

C. Psychological Preparation and Support

8. I can recognize signs of trauma that can be seen in students after a disaster (sleep disturbance, anxiety, etc.).
9. I can maintain my own emotional balance in stressful situations.
10. I can apply psychological first aid techniques (active listening, reassurance, etc.).
11. I know the right communication strategies for anxious parents.

D. School-Community Cooperation

12. I am in regular contact with public and private disaster units.
13. I participate in disaster preparedness workshops with parents.
14. I can coordinate with neighborhood disaster volunteers.

E. Curriculum Integration

15. We have course topics related to disasters.
16. I cover age-appropriate disaster awareness content (experiments, projects, etc.) in my classes.
17. I provide students with practical skills such as preparing a disaster bag and making a disaster family plan.
18. I conduct disaster drills in my classroom.

F. Digital Preparation

19. I actively use public and private sector disaster modules
20. I follow social media accounts of official institutions for accurate disaster information.
21. I use digital disaster simulations in lessons.
22. I keep my emergency contact list up to date to reach parents in case of disaster.

G. Inclusive Preparation

23. I have alternative methods to convey disaster warnings to hearing impaired students.
24. I can use evacuation equipment (stretcher, slide system, etc.) for physically disabled students.
25. I know the special needs of autistic students in disaster situations.
26. I can implement psychological support protocols for disabled students after a disaster.