Turkish Journal of Health Science and Life

THE EFFECT OF DISASTER AWARENESS TRAINING ON THE LEVEL OF DISASTER AWARENESS OF CLASSROOM TEACHER STUDENTS: BURDUR MEHMET AKIF ERSOY UNIVERSITY EXAMPLE

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ARTICLE INFO

Article history:
Received: 25 December 2019
Accepted: 22 August 2020
Available Online: 30 December 2020

Key Words:

Disaster, Disaster Management, Disaster Awareness, Disaster Resistant Society

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Turkish Journal of Health Science and Life
2020, Vol.3, No.3, 1-6.

ABSTRACT

Raising awareness toward disasters from an early age enables the existence of disaster-resistant societies by providing basic behaviors and skills against disaster risks that threaten communities. Therefore, adding the trainings aimed at creating disaster awareness in primary school will be an important step. However, the teachers who will give disaster awareness training in the courses should also be aware of the disaster. The aim of this research is to Burdur Mehmet Akif Ersoy University Faculty of Education Classroom Teaching 3rd and the 4th to evaluate the disaster awareness levels of the class students and to determine the impact of disaster awareness education on the students' disaster awareness levels. A single-group pretest-posttest experimental pattern was used from quantitative research methods. After pre-test data were collected, they were trained and posttest data were collected with the same data collection tool. According to the results of the related sample t-test analysis, disaster awareness training positively increased the participants' disaster awareness levels (t=-8,137; p=0.00). The arithmetic average of the post-test total last-score the disaster awareness level scale is higher than the arithmetic average of the pre-test total scores (Xpre-test=12.23± 4.86; Xpost-test =17.94± 3.26). It is observed that the disaster awareness training given in this study increases the disaster awareness levels of the classroom teacher students and the education given is effective. For this reason, it is important to provide and tighten these trainings to the teacher's candidates in order to create disaster-resistant societies.

1. Introduction

Turkey is a country open to disasters and emergencies due to its technical and structural features. In this context, trainings are of great importance to minimize the damage of disasters and emergencies and to create a socially resilient society.

In another definition, the Disaster and Emergency Management Authority (AFAD) which describes the disaster as the result of the event itself, stated that "nature, technology or human-induced event, which causes physical, economic and social losses for the whole or certain segments of society, stops or interrupts normal life and human activities, and is not sufficient lyricism for the affected society." The emergency is defined as "All situations and situations that are large, but often deal with local facilities, that require urgency" (AFAD Dictionary, 2019). Accordingly, it should be noted that our country's current facilities are not exceeding or exceeding the competence mechanism and ability to cope. When the disasters occurred between 1980 and 2017 are examined, it is observed that an average of 6-25 people per million people per year die per million people per year in terms of loss of life due to natural disasters (AFAD, 2018: 8). Especially given the disasters and emergencies, it turns out that these situations are much more important for schools. In 2003, a 6.4-magnitude earthquake in Bingol completely collapsed in the boarding district building and the school building near The Village of Çeltiksuyu, killing 1 teacher and 84 students. The earthquakes, which occurred on October 23 and November 9, 2011 in Van;

7 schools in Simav and 234 in Van were severely damaged (Özmen and İnce, 2017: 22). Therefore, it is seen how important it is to be prepared for disasters and emergencies in schools that are the center of education and to create a disaster-resistant society with the trainings provided. In 2010, the School-Based Disaster Education Project was launched in cooperation with the Public of Turkey Ministry of National Education and the Japan International Cooperation Agency (JICA) in order to minimize disaster damage in schools and to improve disaster awareness. The project was then expanded a little further, including AFAD and the Turkish Red Crescent. Thus, from the second phase of the expanded project, teachers have been given online and face-to-face school-based disaster training (http:// istanbul.meb.gov.tr, 2019).

Creating awareness against disasters, especially from an early age, enables the existence of disaster-resistant societies by providing basic behavior and skills against disaster risks that threaten communities. Therefore, adding the trainings aimed at creating disaster awareness in primary school will be an important step. However, the teachers who will give disaster awareness training in the courses should also be aware of the disaster.

Therefore, the aim of the study was to evaluate the disaster awareness levels of the Burdur Mehmet Akif Ersoy University Faculty of Department of Classroom Teaching 3rd and 4th year students and to determine the effect of disaster awareness training on the level of disaster awareness.

2. Materials and Method

In this study, which was conducted to assess the disaster awareness levels of the class students and to determine the impact of disaster awareness education on the students' disaster awareness levels, the experimental pattern of the pretest-posttest without a control group used. Accordingly, an argument is applied to a group and measurement is performed before and after the experiment. The difference between the pre-test and post-test averages shows the effect of the argument on the dependent variable (Yamak et al., 2014: 253).

The iconic view of the model is as follows:

G1 O1.1 X O1.2

G1:Research group,
O1.1: First measurement (pre-test),
X:argument (educational activity),
O1.2: second measurement (post-test)

If the model is O1.2 > O1.1, it is assumed that this is due to application X. Accordingly, our working group Burdur Mehmet Akif Ersoy University Faculty of Education Classroom Teaching 3. And the fourth. The class consists of students and has reached a total of 78 students. Our X variable is disaster awareness training. This training, which is given by presentation technique, is based on disaster awareness trainings prepared by AFAD and the information contained in the literature. The authors who provide this training have a Certificate of Disaster Awareness Educator Trainer.

Universe-Sampling

Burdur Mehmet Akif Ersoy University Faculty of Education Classroom Teaching 3. and 4. the class consists of students. Sample selection was not made and all students were tried to be reached. In total, 78 students were reached and trained and the questionnaire was conducted.

Data Collection Tools and Analysis

In April 2019, 78 students conducted the survey and the data were collected using a questionnaire. In the first phase, pre-test data were collected and then trained to develop disaster awareness. After the training, the same data collection tool and posttest data were collected. Quantitative data were statistically analyzed by arithmetic mean and associated sample t-test. The analysis was conducted using the SPSS-16 package program. The frequency analyses of the data obtained are given in detail. Relationship sampling t test was used to compare the data collected before and after disaster awareness training.

In the study, it was first examined whether the data obtained showed normal distribution. For this reason, Skewness-Kurtosis values are discussed. The Skewness-Kurtosis value is considered to be a normal

distribution of ±2.0 (George, D., & Mallery, M.; 2010). Accordingly, pre-test and post-test scores for disaster awareness levels are normally distributed (Table 1).

Table 1: Conformity Of Pre-Test-Post-Test Data To Normal Distribution

Disaster Awareness Level	Skewness	Curtsies
Pre-test	-0.229	-0.974
Post-test	-1.199	1.792

Cronbach's Alpha is stated to be reliable in cases with a value of 0.70 or higher (Durmuş and others, 2011: 89). In our study, cronbach's Alpha value was determined as 0.831 in the reliability analysis of the questions prepared to determine the level of disaster awareness and accordingly the level of reliability is high.

3. Results

In this part of the study, the data obtained from statistical tests were analyzed and general findings were included in line with sub-problems. Data on the socio-demographic characteristics of the participants are stated in Table 2.

ccordingly, 67.9% of the participants were female students and 32.1% were male students and the mean age was 20.0±1.21 (min:20; Max:26). 67.9% of respondents stated that they had never received any prior training for disaster awareness. While the vast majority (94.9%) of these participants consider disaster awareness training necessary, all (100%) think that disaster training should be provided from primary school.

Pre-test and post-test data of the questions we have asked the participants for disaster awareness are contained in Table 3. Accordingly, when we look at it in general, it is seen that the correct answering rates of questions increase in the post-test data. In the question of the definition of disaster before training, the correct knowledge rate was 28.2%, while after the training this rate increased to 79.5%. In addition, "The first 48 hours (2 days) of gold watches after the disaster." Participants are expected to be marked as "no" to the correct answer to the question. Because in disasters, golden hours are 72 hours. The rate of

Table 2: Distribution of Participants by Socio-Demographic Characteristics.

Socio-demographic characteristics		N	%
Gender	Woman	53	67.9
	Male	25	32.1
Class	Grade 3	51	65.4
	Grade 4	27	34.6
Family Income	Less Than Income Expense	26	33.3
	Income Equal to Expense	43	55.1
	More Than Income Expense	9	11.5
Where he stayed	Dormitory	22	28.2
	Home	33	42.3
	Apart	23	29.5
Have you ever been trained to raise awareness of disasters?	Yes	25	32.1
	No	53	67.9
Do you consider disaster awareness training necessary?	Yes	74	94.9
	No	4	5.1
Have you ever been directly hit by a disaster?	Yes	29	37.2
	No	49	62.8
Do you think the area where you live is a risk to disaster?	Yes	69	88.5
	No	9	11.5
Do you think disaster education should be provided from primary school?	Yes	78	100.0
	No	0	0.0

Table 3 : Distribution of Pre-Test/ Post-Test Answers for Participants' Disaster Awareness

Questions about Disaster Awareness	Pre-test Correct Answer Percentage (%)		Post-test Correct Answer Percentage (%)	
	N	%	N	%
Disaster; It is possible to cope with the adverse effects of any danger on life, property, environment, economy and cultural assets."	22	28.2	62	79.5
We can call events that can't be dealt with with local facilities an emergency.	9	11.5	49	62.8
Risk is the likelihood of danger.	64	82.1	70	89.7
The first 48 hours (2 days) of gold watches after the disaster.	10	12.8	62	79.5
The formation of disaster-resistant societies is important for disaster risk mitigation efforts.	44	56.4	61	78.2
We can call the phenomenon of rapid increase in water and damage to living things, land, property and property living around the bed "flood".	9	11.5	28	35.9
After any disaster, we need to secure the items that may fall on us to block our way with the appropriate materials.	59	75.6	55	70.5
ZDS (Compulsory Earthquake Insurance) increases the burden on the state budget for economic damage caused by possible natural disasters.	38	48.7	53	67.9
AFAD has full responsibility for disaster preparedness.	32	41.0	63	80.8
We don't need to locate the meeting places before the disaster.	54	69.2	67	85.9
It is important that every individual in the community is ready during the golden hours after the disaster.	59	75.6	72	92.3
The Disaster and Emergency Kit should be included to reveal our location with whistles and flashlights.	61	78.2	67	85.9
Children are the group most affected by the disaster, so the Disaster and Emergency Kit should include toys.	29	37.2	54	69.2
Disaster and Emergency Kit is only necessary for our home, an unnecessary expense for our workplace and our car.	51	65.4	57	73.1
As society's ability to suffer increases, so does its resistance to disaster.	23	29.5	47	60.3
Drills are unnecessary and cause us to waste our time.	55	70.5	68	87.2
The perimeter of stairs and balconies is safe in the event of an earthquake.	57	73.1	65	83.3
Tremors Are Not Felt During Earthquake; Target Shrink and COLLAPSE - TRAP - HOLD.	54	69.2	54	69.2
We need to get out of the house right after the earthquake, turning off the lights.	29	37.2	44	56.4
The water at the ankle level can drag you, and the water at your knee level can drag your vehicles.	24	30.8	43	55.1
In the landslide area, we help the teams to come to save us by staying close to stream beds, valleys and low-altitude locations.	30	38.5	50	64.1
Cutting off oxygen during a fire doesn't stop the fire, it's going to increase it.	30	38.5	52	66.7
If we forgot the keys to our car at home during the evacuation after the earthquake, we should go back and get it.	55	70.5	73	93.6
First aid training is not required in the event of a disaster.	56	71.8	74	94.9

correct response given for this was 12.8% in the pre-test and increased by 79.5% in the post-test. When we look at other questions, the definition of Compulsory Earthquake Insurance, the job description of AFAD, what should be in the disaster bag, disaster resistance, earthquakes, landslides and floods, such as what should be done in the event of a common disaster in our country, questions about what should be done the correct response rate has increased significantly in the post-test.

Arithmetic averages were taken and compared based on the total scores of the participants' pre-test/post-test data (Table 4). Accordingly, the arithmetic mean of the total scores of the last-test was X=12.23± 4.86, while the arithmetic average of the post-test total scores was X=17.94± 3.26.

In this study, because of the normal distribution of pre-test and post-test scores, whether there was a significant difference between the participants'

Table 4: Distribution of Arithmetic Average of Pretest-Posttest Total Scores

	X	Standard Deviation	Minumum-Maximum
Arithmetic average of pre-test total scores	12.23	4.86	3-21
Arithmetic average of post-test total scores	17.94	3.26	7-23

Table 5. Related Sample T-Test Results of Participants' Disaster Awareness Level Pre-test and Post-test Average Scores

					t texts		
Groups	**N**	$\bar{X}$	**ss**	$Sh_{\bar{x}}$	***t***	**Sd**	**p**
Pre-test	78	0,510	0,203	0,223	-8,137	77	**0,000**
Post-test	78	0,748	0,136	0,154			

disaster awareness level pre-test and post-test average scores was examined using the associated sample t-test technique and data are contained in Table 5.

Accordingly, the difference between the arithmetic means was statistically significant as a result of the associated sample t-test to determine whether the disaster awareness level pretest-posttest averages showed a significant difference and was found to be statistically significant (t=-8,137; p=0.00). The arithmetic average of the post-test total scores on the Disaster awareness level scale compared to the mean values is higher than the arithmetic average of the pre-test total scores ($X_{pre\text{-}test}$=12.23± 4.86; $X_{post\text{-}test}$ =17.94± 3.26). Accordingly, disaster awareness training has increased the students' disaster awareness levels by positively affecting them.

4. Discussion and Conclusion

Raising awareness of disasters from an early age enables the existence of disaster-resistant societies by providing basic behaviors and skills against disaster risks that threaten communities. Therefore, disaster awareness trainings should be given to students at every stage of education, to raise awareness of disasters that may occur in the environment in which they live and to ensure that they are prepared (Dikmenli and Yakar, 2019: 390). Therefore, adding the trainings aimed at creating disaster awareness in primary school will be an important step. In a study conducted in Turkey, he stated that disaster awareness training given to primary school students significantly increases the awareness of the students of the disaster and that these trainings should be included in the curriculum of the Public of Turkey Ministry of National Education (Özgüven, 2006: 42). However, the teachers who will give disaster awareness training in the courses should also be aware of the disaster.

In a study, it was stated that even in higher education institutions with the highest levels of education, students were low in disaster awareness (Ozkazanc and Yuksel, 2015: 753). In another study examining the perception of disaster susceptible teachers, the teacher candidates' sense of disaster was moderate, especially when the perception of disaster awareness of senior students was higher than that of first-year students. (Dikmenli and Yakar, 2019: 386). In this respect, teachers should be aware and educated about the disaster. For this reason, it was aim that evaluate the disaster awareness levels of the Burdur Mehmet Akif Ersoy University Faculty of Department of Classroom Teaching 3rd and 4th year students and to determine the effect of disaster awareness training on the level of disaster awareness.

In this study, which we used experimental patterns without a control group, the majority of the participants stated that they had never received any

training to improve disaster awareness and that these trainings were necessary. At the same time, all of the participants, without exception, believe that disaster education should be given from primary school. Therefore, it is important for these students, who will be working as classroom teachers in the future, to be aware of how important disaster-conscious education is and how it should start at an early age.

It has been observed that the correct answering rates of the participants' questions about disaster awareness have increased in the latest post-training test data. After this training, the correct answering rate of the participants' questions about the definition of disaster, definition of Compulsory Earthquake Insurance, job description of AFAD, what should be in the disaster bag, disaster resistance, earthquake, landslides and floods in the event of a common disaster in our country have increased significantly in the post-test. In this respect, it has been observed that education has a positive effect on the participants. As a result of the analysis to confirm this result, it was found that the arithmetic average of the post-test total scores was higher than the arithmetic average of the n -test total scores and the difference between the arithmetic means was statistically significant (t=-8,137; p=0.00). According to this, class teaching 3. And the fourth. Disaster awareness training given to students studying in the classroom has increased the students' disaster awareness levels by positively affecting them.

In general, it is observed that the disaster awareness training given in this study increases the disaster awareness levels of the classroom teacher students and the education given is effective. For this reason, it is important to provide and tighten these trainings to the teacher's candidates in order to create disaster-resistant societies. Central government, local government and the Public of Turkey Ministry of National Education's should work together in a coordinated manner, especially in order to increase and sustain the success of disaster training. In addition, adding disaster education to the curriculum will be an important step in the success and sustainability of education.

the Public of Turkey Ministry of National Education and the Disaster and Emergency Management Authority should follow up the trainings in coordination and establish a target plan of at least 5 to 100 years and ensure its sustainability. The training is given by trained educators specializing in the development of disaster awareness and emergency and disaster management graduates in their associate degree program and emergency aid and disaster management in the undergraduate program. graduates should be selected.

References

1. AFAD (2018). Tükiye'de Afet Yönetimi Ve Doğa Kaynaklı Afet İstatistikleri. Afet Ve Acil Durum Yönetimi Başkanlığı, Ankara.
2. AFAD Sözlük (2019). Açıklamalı Afet Yönetimi Terimleri Sözlüğü. https://www.afad.gov.tr/aciklamali-afet-yonetimi-terimleri-sozlugu , Erişim Tarihi: 12/12/2019.
3. Dikmenli, Y. ve Yakar, H.(2019). Öğretmen Adaylarının Afet Bilinci Algı Düzeylerinin İncelenmesi. YYÜ Eğitim Fakültesi Dergisi (YYU Journal of Education Faculty). 16(1): 386-416.
4. Durmuş, B., Yurtkoru, E. Serra ve Çinko, Murat (2011), Sosyal Bilimlerde SPSS'le Veri Analizi, İstanbul: Beta Yayınları.
5. George, D., ve Mallery, M. (2010). SPSS for Windows Step by Step: A Simple Guide and Reference, 17.0 update (10a ed.) Boston: Pearson.
6. http://istanbul.meb.gov.tr/www/okul-tabanli-afet-egitimi-programi/icerik/2748, Erişim Tarihi: 12/12/2019.
7. Ozkazanc, S., ve Yuksel, U. D. (2015). Evaluation Of Disaster Awareness And Sensitivity Level Of Higher Education Students. *Procedia-Social and Behavioral Sciences*, 197: 745-753.
8. Özgüven, B.(2006). İlköğretim Öğrencilerine Verilen Temel Afet Bilinci Eğitiminin Bilgi Düzeyine Etkisi (Yayınlanmış Yükseklisans Tezi). Dokuz Eylül Üniversitesi Sağlık Bilimleri Enstitüsü, İzmir
9. Özmen, B., ve İnce, Z. D. (2017). Okul Tabanlı Afet Eğitimi. Resilience, 1(1), 21-29.
10. Yamak, H., Bulut, N. ve Dündar, S.(2014). 5. Sınıf Öğrencilerinin Bilimsel Süreç Becerileri İle Fene Karşı Tutumlarına FETEMM Etkinliklerinin Etkisi. GEFAD / GUJGEF, 34(2): 249-265.