



Results and Needs of Training of Trainers of NGO Staff Working in the Earthquake Zone After the Devastating Earthquake in Turkey on 6 February

Türkiye’de 6 Şubat’ta Meydana Gelen Yıkıcı Depremi Ardından Deprem Bölgesinde Çalışan STK Personelinin Eğitici Eğitiminin Sonuçları ve İhtiyaçları

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Abstract

Introduction: Earthquakes are natural disasters and affect not only the physical infrastructure but also the general health of the society. Along with the acute period of the earthquake, many NGOs have started to serve in the earthquake region until today. In order to minimise the differences in training and communication skills, it was planned to provide training to 30 employees of NGOs in the region.

Methods: The training of 30 people from NGOs providing one-to-one services in the earthquake zone was completed. A pre-test was administered at the beginning of the training and a post-test and a training evaluation form at the end of the training. The results were analysed statistically.

Results: The difference between the mean ranks of the participants’ pre-test and post-test scores from the test prepared on training of trainers was found to be statistically significant ($p < 0.001$). The participants stated that they would like to receive more information on communication (48.27%), wash training (37.93%) and PHC services (24.13%) and the trainings should be planned more for the future.

Conclusion: The content of the training should be reviewed and expanded, and the continuation of providing training and other support for public health improvement in the region is deemed necessary.

Keywords: Earthquake, Non-Governmental Organisations Employees, Training of Trainers.

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Öz

Giriş: Depremler doğal afetlerdir ve sadece fiziksel altyapıyı değil toplumun genel sağlığını da etkiler. Depremin akut dönemiyle birlikte günümüze kadar birçok STK deprem bölgesinde hizmet vermeye başlamıştır. Eğitim ve iletişim becerilerindeki farklılıkları en aza indirmek için bölgedeki 30 STK çalışanına eğitim verilmesi planlanmıştır.

Yöntem: Deprem bölgesinde birebir hizmet veren STK'lardan 30 kişinin eğitimi tamamlanmıştır. Eğitimin başında bir ön test, eğitimin sonunda ise bir son test ve eğitim değerlendirme formu uygulanmıştır. Sonuçlar istatistiksel olarak analiz edilmiştir.

Bulgular: Katılımcıların eğitimcilerin eğitimi konusunda hazırlanan testten aldıkları ön test ve son test puanlarının sıra ortalamaları arasındaki fark istatistiksel olarak anlamlı bulunmuştur ($p < 0.001$). Katılımcılar iletişim (%48,27), yıkama eğitimi (%37,93) ve PHC hizmetleri (%24,13) hakkında daha fazla bilgi almak istediklerini ve eğitimlerin gelecekte daha fazla planlanması gerektiğini belirtmişlerdir.

Sonuç: Eğitimin içeriği gözden geçirilmeli ve genişletilmeli ve bölgede halk sağlığının iyileştirilmesi için eğitim ve diğer desteklerin sağlanmasına devam edilmesi gerekli görülmektedir.

Anahtar Kelimeler: Deprem, Sivil Toplum Örgütü Çalışanları, Eğitici Eğitimi.

INTRODUCTION

Earthquakes are natural disasters resulting from the sudden release of energy in the earth's crust. These events affect not only the physical infrastructure but also the general health of the society (1). Earthquakes, as natural disasters, have far-reaching consequences on healthcare systems, affecting not only immediate medical needs but also the long-term well-being of communities (2,3).

The seismic vulnerability of healthcare systems underscores the great importance of resilience and adaptability. A robust healthcare system in earthquake-prone regions should not only respond effectively to immediate medical needs but also demonstrate the capacity to recover and provide sustained healthcare services. This involves fortifying healthcare infrastructure, ensuring the availability of medical resources, and preparing healthcare professionals for the unique challenges posed by seismic events (3).

The physical infrastructure of health facilities is often severely compromised during earthquakes. Assessing the extent of damage to hospitals, clinics and other health facilities and formulating strategies for rebuilding resilient health infrastructure is one of the most important steps. Health facilities that have been destroyed or severely damaged by earthquakes are unlikely to be able to provide health services (4).

Earthquakes disrupt supply chains of essential medical resources. The challenges posed by the disruption of medical supply chains and the shortage of medicines and medical equipment are life-threatening in the emergency

period in earthquake zones. Therefore, approaches to provide medicines and medical supplies in high earthquake risk areas are one of the measures to be taken in the pre-earthquake period.

Access to clean water and sanitation is vital for health facilities. The impact of earthquakes on water and sanitation systems should be addressed and restoring these services to maintain hygiene standards in health facilities is a priority.

It is necessary to analyze the effects of earthquakes as immediate and long-term. In the immediate period, after an earthquake, a number of urgent health problems may arise: traumatic injuries, respiratory problems, water and food insecurity, infections and epidemics, psychosocial problems, pregnancy and child health problems, drug access problems, power outages and limitation of health services: earthquakes can cause power lines to be cut and health facilities to become dysfunctional. This may make it difficult to provide emergency health services. Effective response to health problems in the acute period requires rapid and coordinated action of health personnel, effective implementation of emergency plans and community support.

In the long term, earthquakes may have various effects on health: long lasting psychological effects, permanent damage to health infrastructure, urban transformation and housing issues, economic challenges and health access, social discrimination in society, long-term risk of epidemics (5). Long-term health impacts are a complex concept reflecting the profound and far-reaching effects of earthquakes on societies. To cope with these impacts,

it is important that health systems, emergency response plans and communities are prepared.

Various infections may develop in the long term after the earthquake and disaster survivors may die from infections (6). Three factors that facilitate the development of infection come to the fore; earthquake and the stress caused by it, lack of hygiene and unfavourable environmental conditions (4). In addition, the damage to water, sewerage, electricity and gas networks with the earthquake increases the negativities experienced. In addition, the unplanned accommodation of earthquake-affected people in camps with crowds of people in the camps prepares the ground for the development of infection due to lack of food and clean water. Earthquake may have different effects on earthquake victims in the post-disaster period. Exposure to different infections may occur in these post-earthquake periods.

As a result, the placement of disaster victims after natural disasters should be well planned. The location of the shelter camps to be established, their proximity to water sources, the distance of mobile toilets and bathrooms to be established to these water sources should be planned well. In addition to this, access to clean water is important, and it will be possible to prevent infectious diseases that can be transmitted through water with the presence of clean water and compliance with hygiene rules. In addition, ensuring sanitation is one of the important steps at this stage.

Türkiye Earthquake: February 6, 2023

On 6 February 2023, earthquakes with magnitudes of 7.7 and 7.6 and subsequent aftershocks in Pazarcık and Elbistan districts of Kahramanmaraş, 9 hours apart, caused great destruction and loss of life in 11 provinces (Kahramanmaraş, Hatay, Gaziantep, Adıyaman, Malatya, Kilis, Şanlıurfa, Adana, Osmaniye, Diyarbakır, Elazığ) where nearly 15 million people live. The earthquake was effective in an area of 108,812 km² covering 11 provinces in the Eastern and Southeastern Anatolia Region (Figure 1). According to the strong ground motion records of these two main shocks, which are recorded as the most destructive earthquake storm in the history of the country, field observations and information received from the people of the region, it is possible to say that the first earthquake was more effective in Kahramanmaraş and Hatay and the second earthquake was more effective especially in Malatya. According to official statements, 50,783 people lost their lives and 107,204 people were injured in the earthquakes that affected a very wide geography (7-10).

Although it has been about 9 months since the earthquake, the people living in the affected areas have not yet settled down and generally live in tent cities and container cities. This situation brings along the health problems mentioned in detail above.



Figure 1. The region where the earthquakes on Feb 06, 2023 were effective in Türkiye (7)

In order to overcome the health problems experienced and possible health problems after the earthquake, public health education is of great importance within the scope of primary prevention. Public education and awareness raising within the framework of primary prevention is important in coping with both acute and long-term health effects of earthquake.

Along with the acute period of the earthquake, many non-governmental organisations have started to serve in the earthquake region until today. Especially in the field of health, in order to protect public health, many non-governmental organisations continue to work with the public authority in terms of both education and financial support to the earthquake victims. During the visits to the region, it was noteworthy that there were differences in the training and communication skills of the volunteer groups working in these organisations.

In order to minimise these differences and to convey the correct information to the society with appropriate communication and training techniques, it was planned to train 30 people from NGO employees providing services in the earthquake region.

METHODS

Training of trainers on communication, wash and primary health care was planned for early October 2023. The date of the planned training and the details of the training were announced via e-mail to the managers of NGOs operating in the earthquake zone. Three participants working in the field of health from the first 10 NGOs that applied were accepted to the training.

Training of trainers on Communication, WASH and Primary Health Care was held in Antalya between November 22-25, 2023. The training of 30 people from NGOs providing one-to-one services in the earthquake zone was completed. The professions of the participants were nurses, midwives, psychologists, physical therapy and rehabilitation technicians.

A pre-test was administered at the beginning of the training and a post-test at the end of the training. Before the training started, a pre-test including questions on primary health care services in Türkiye, health education, communication, training environment, presentation techniques and counselling was administered to the participants. At the end of the training, the post-test, which included the same topics but the place and answer order were changed, was administered. At the end of the training, a training evaluation form was distributed and the participants were asked to evaluate the training. The answers given to the pre-test and post-test questions were analysed with the SPSS programme.

RESULTS

A number of participants' correct answers in the pre-test and post-test were analyzed according to the total number of correct answers. ($p < 0.001$) (Table 1). The difference between the mean ranks of the participants' pre-test and post-test scores from the test prepared on training of trainers was found to be statistically significant ($p < 0.001$). This difference was in favor of the post-test. In other words, as a result of the training, the knowledge levels of the participants increased significantly in a positive way in terms of statistics.

Table 1. Comparison of the pre-test and post-test scores of the participants prepared on training of trainers

Score	Group	n	$\bar{x}_{sıra}$	Rank	z	P*
Post-test score – Pre-test score	Decreases	1	2,50	2,50	-4,457	<0,001
	Increases	25	13,4	348,50		
	Equal	4				
	Total	30				

*Wilcoxon Signed Ranks Test

The results of the analysis of the evaluation form distributed after the training are presented in Table 2.

Table 2: Training of Trainers Evaluation Results

	Strongly Agree (3) n (%)	Moderately Agree (2) n (%)	Strongly Disagree (1) n (%)
The training programme achieved its objectives	26 (89.7)	3 (10.3)	-
I achieved my personal expectations	19 (65.5)	10 (34.5)	-
The training programme is relevant to my profession	24 (82.8)	4 (19.8)	1 (3.4)
The organisation of the training was good	29 (100.0)	-	-
The training materials used in the training were adequate	29 (100.0)	-	-
The location of the training was suitable	19 (65.5)	9 (31.0)	1 (3.4)
The content of the training was adequate	19 (65.5)	10 (34.5)	-
The trainer communicated effectively	27 (93.1)	2 (6.9)	-
The trainers were enthusiastic and enthusiastic about the topic	29 (100.0)	-	-
The subject was taught in practice rather than theory	19 (65.5)	10 (34.5)	-
Ensured everyone's participation in the lesson with educational questions	28 (96.6)	1 (3.4)	-
This training helps me to feel more competent in my job	22 (75.9)	6 (20.7)	1 (3.4)
Total	mean±sd: 2.82±0.18 median (min-max): 2.92 (2.33-3.00)		

While 20 (69.0%) of the participants found the duration of the training appropriate, 8 (27.6%) stated that it was too short. When asked to rate the contribution of this training to their personal skills on a scale of one to ten, the participants gave an average answer of 8.10 ± 1.68 .

When asked which of the topics covered in this training in the evaluation form would be most useful in your profession, 76% (22/29) stated communication skills, 68.9% stated WASH training, 65.5% (19/29) stated problem solving, 55.17% (16/29) stated all topics, and 34% stated primary health care.

When asked on which topics they would like to receive more information, 48.27% said communication, 37.93% said WASH education, 24.13% said primary health care services, 13.79% said all topics, 10.34% said effective presentation skills, 6.89% said problem solving and 6.89% said approach according to age groups. Only 7.29% of the participants stated that the training was

sufficient. When asked on which topics they would like to receive less information or spend less time, no one specified a topic. In the other comments section, the majority of the participants stated that the training was organised in a positive environment and the training was good (79.31%) and almost all of them (93.10%) stated that the trainings should be planned more for the future.

DISCUSSION

After the period requiring acute emergency assistance in the earthquake zone has been overcome, ensuring the continuity of basic needs for the people left behind and protecting their health are among the objectives. Health education is one of the basic parameters of public health in protecting health.

Many trainings organized in the earthquake zone within the framework of health education and provided assistance to the earthquake victims. After the earthquake, trainings were planned in many cities affected by the earthquake

in order to inform the society, especially on general hygiene issues (WASH, clean water supply, disposal of solid waste, protection against infectious diseases, etc.). Collaboration is very important with other NGOs in the region for community trainings. During these trainings, it was seen that the staff working in NGOs have deficiencies in terms of primary health care and health protection, especially in terms of communication and counseling with the community while providing services. Following these determinations, the managers of NGOs were contacted and after a joint decision, a training was planned to be held in Antalya on primary health care services, WASH, communication skills and counseling, as well as on the issues identified as missing for NGO employees who provide counseling to earthquake victims.

Only a small group was included for the short training of trainers and the effectiveness of the training was evaluated. In addition, feedback was received from the participants on the parts of the training that needed to be improved and planning for the next training was organized.

The results show that the training achieved its goal. However, this intervention was only a small part of the iceberg. As a result, training programs within the scope of 'essential interventions and health education to be undertaken' for NGO workers providing significant support to the community in earthquake-prone areas should be further developed in the near future and continue without interruption.

CONCLUSION

The content of the training should be reviewed and expanded, taking into consideration the feedback and expectations from the course participants.

Efforts should be made to increase the participation of NGOs and stakeholders in the upcoming training sessions.

The program's findings should be more widely shared with the Ministry of Health and local health authorities, and advocacy for the obtained results should be conducted.

The continuation of providing training and other support for public health improvement in the region is deemed necessary.

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