

# ISLAMIC-BASED FAMILY RESILIENCE TRAINING TO INCREASE FAMILY RESILIENCE, COPING, AND DISASTER PREPAREDNESS

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## ABSTRACT

Earthquake victims not only experience emergency problems such as construction, food, physical condition due to the earthquake, but also mental health problems. The study is aimed to analyze the effectiveness level of Islamic-Based Family Resilience Training to Increase Family Resilience, Coping, and Disaster Preparedness. A non-randomized pre- and posttest control group design was used. Sampling was conducted by purposive sampling And 20 subjects recruited for treatment group and 20 subjects into control group. The independent variable was Islamic-Based Family Resilience Training and the dependent variables were family resilience, coping, and disaster preparedness. The data were collected using combination of Walsh's Family Resilience Questionnaire and Lietz family resilience process, coping questionnaire and disaster preparedness family assessment. The data analyses used paired t-test/ Mann-Whitney U test and independent t- test. The characteristic

respondents were 30 – 39 years old age (16/40, 40.0%), male (35/40, 87.5%), the highest educational background was senior high school level (15/40, 37.5%) and the occupation was in private industry (17/40, 42.5%). There were significant differences between control and treatment group in the family resilience ( $p=0.010$ ), coping ( $p=0.000$ ), and disaster preparedness ( $p=0.006$ ). Family resilience, coping, and disaster preparedness are subject of change when Islamic-Based Family Resilience Training is implemented.

**Keywords:** coping, disaster preparedness, resilience, spiritual, psychology

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## INTRODUCTION

The earthquake that occurred in North Lombok resulted in fatalities, damage to infrastructure and economic losses. Earthquake victims not only experience emergency problems such as construction, food, and physical condition due to the earthquake, but also mental health problems (1). An earthquake of magnitude 7 occurred in Lombok, West Nusa Tenggara on August 5, 2018, following a series of earthquakes since early July 2018. About 390 people died, along with 1447 injuries, 67,875 houses damaged, 468 schools damaged, and 352,793 people displaced (2).

A survey regarding mental health and family adaptation was carried out in North Lombok District 1.5 years after the earthquake disaster. A total of 585 families participated in the survey. A surprising result was found in the families of victims of the earthquake. The highest percentage of family resilience was in Phase 3: Acceptance (44.3%), while the highest level of family resilience was in Phase 4: Growing Stronger (22.4%). There were no families ready to help each other or having family resilience in Phase 5: Helping Others. Half the families there were found to have low coping rates. Finally, more than half of the families participating in the study had a low level of preparedness (3).

Previous research determined the effect of social support on resilience being moderated by gratitude. It mentioned that social support had been monitored low for earthquake survivors in Lombok, West Nusa Tenggara. A victim having high gratitude, whatever the impact of disaster they have to overcome, has increase in resilience and also increase in social support. Emotional support is more influential on increasing resilience (5). The factor of protection against adequate stressors increases family endurance or, in other words, increases family resilience (6)

This is a training aimed to increase family resilience, coping, and disaster preparedness. The training combines family resilience strengthening, coping enhancing, and

disaster preparedness confidence. The training is done by providing education, hands-on practice, and increasing faith. The uniqueness of this training is in encouraging the subject (family) to perform ibadah, an Islamic ritual of worshipping Allah (God in Islam). The enhanced ibadah of a family is expected to increase the family submission to the will of Allah. Submission to Allah's will means an increase in positivity of any hardness encountered by the family (7). An enhanced positivity leads the family to manage and take precautions in case the hardness continues. In this study, the highlighted hardness is the disaster impact risk (8). The family management expected by the training is good family resilience and good coping mechanism (9). On the other hand, the precaution is a means of family preparedness toward disaster. The highlighted problem is the need to explain the effectiveness of the Islamic-Based Family Resilience Training. The study aims to analyze the effectiveness level of Islamic-Based Family Resilience Training to Increase Family Resilience, Coping, and Disaster Preparedness.

## METHODS

A non-randomized pre and posttest control group design was used for this study. The research population was vulnerable families living in the disaster-prone location with criteria: 1) Experienced trauma in the past six months; 2) Head of household; 3) Able to read and write; 4) Muslim residents; 5) Not having handicapped; and 6) Not having a person suffering mental illness or senile. Sampling was conducted by purposive sampling and there were 20 subjects for each treatment and control group. The treatment group was given Islamic-Based Family Resilience Training and the control group was left without any intervention. The independent variable was Islamic-Based Family Resilience Training and the dependent variables were family resilience, coping, and disaster preparedness. The data were collected using a combination of Walsh Family Resilience Questionnaire

and Lietz family resilience process (10,11), for coping it used coping questionnaire (WCQ) (12) and disaster preparedness was assessed used disaster preparedness family assessment (DPFA) (3). This study was approved by the Ethics Committee, Faculty of Nursing, Universitas Airlangga, with the number 1882-KEPK. The data analyses used paired t-test/Mann-Whitney U Test and independent t-test.

**RESULTS**

**Characteristic of Respondents**

The research was conducted in the Medana Village, Tanjung District, North Lombok Regency, West Nusa Tenggara Province, Indonesia on 6th February until 21st February 2020. The group allocation was Kopang sub-village as the location of the control group and the Teluk Dalam Kern sub-village as the location of the treatment group. The majority of Medana villagers are Muslim. At the time of the earthquake disaster, the North Lombok Village was the part that had the most building damage because it was close to the earthquake epicenter at the northern part

of the sea. The average age of the respondents was 30 – 39 years (16/40, 40.0%) and male was predominant gender (35/40, 87.5%). The highest educational background was bachelor and the highest proportion was senior high school level (15/40, 37.5%) and the occupation was in private industry (17/40, 42.5%). The majority culture of respondents was always doing Muslim worship (23/40, 57.5%) (Table 1).

**The effect on family resilience**

Mean and SD difference values from measurements after and before treatment in the treatment group were (6,400 ± 4.706) with a significance of p = 0.000 (α ≤ 0.05). This value means that there is a significant increase in value. For independent statistical test results, t-test obtained the value of T = 2.728 (T table = 2.024) and the value of p = 0.010 (α ≤ 0.05) from the value of the difference between the pre and post of the two groups. It was concluded that there were significant differences between the control group and the treatment group (Table 3).

**Table 1.** The Demographic Characteristic of Respondents

Group	Respondent Characteristics	Mean or Mode	SD	Normality test ( <i>Shapiro Wilk</i> )				Homogeneity Test	
				S*	SE*	S/SE*	Meaning	Levine's Test Sig.**	Meaning
Treatment	Gender	Male***		2.123	0.512	4.146	Not Normal	0.351	Homogent
Control		Female***		2.888	0.512	5.640			
Treatment	Age	36.6	11.896	0.663	0.512	1.295	Normal	0.006	Not Homogent
Control		40.9	6.215	0.074	0.512	1.294			
Treatment	Occupation	Private***		-	0.512	0.144	Normal	0.133	Homogent
Control		Entrepreneur***		-	0.512	-			
Treatment	Educational Background	Elementary School <sup>a</sup> ***		0.146	0.512	-	Normal	0.183	Homogent
Control		Senior High School***		-	0.512	0.285			
Treatment	Worship habitual	Always***		-	0.512	-	Normal	0.178	Homogent
Control		Often <sup>a</sup> ***		0.000	0.512	-			

**Table Information:**

- \* S = *Skewness*
- \* SE = *Std. Error* = [ -2 < ( S / SE ) < 2 ] = Normal
- \* S / SE = *Skewness / Std. Error*
- \*\* Homogent = α > 0.05
- \*\*\* Showing mode from the Data
- a There is more than 1 mode, table shows smallest mode

**Table 2.** Distribution Frequency of Research Variable

					<i>Shapiro-Wilk</i>			Meaning	Levene's test Sig.**	Meaning
					Statistic	df	Sig.*			
Treatment	Family Resilience	Pre	65.75	8.258	0.775	40	0.000	Not Normal	0.136	Homogent
		Post	72.15	5.641						
Control	Family Resilience	Pre	60.70	13.704	0.921	40	0.008	Not Normal	0.077	Homogent
		Post	61.85	8.481						
Treatment	Coping	Pre	30.95	2.564	0.967	40	0.289	Normal	0.914	Homogent
		Post	36	2.575						
Control	Coping	Pre	31.15	3.066	0.968	40	0.321	Normal	0.402	Homogent
		Post	31.6	2.458						
Treatment	Cortisol	Pre	23.93	9.872	0.848	40	0.000	Not Normal	0.083	Homogent
		Post	17.68	5.653						
Control	Cortisol	Pre	17.15	7.582	0.956	40	0.118	Normal	0.839	Homogent

		Post	18.68	8.261						
Treatment	HSP 70	Pre	4.81	1.27	0.958	40	0.141	Normal	0.828	Homogent
		Post	2.7	1.415						
Control		Pre	3.76	0.972	0.981	40	0.721	Normal	0.593	Homogent
		Post	2.80	1.188						
Treatment	Disaster Preparedness	Pre	52.6	3.952	0.943	40	0.045	Not Normal	0.069	Homogent
		Post	56.75	2.314						
Control		Pre	49.3	5.545	0.896	40	0.001	Not Normal	0.238	Homogent
		Post	50.05	4.261						

**Table 3.** Variable family resilience and disaster preparedness treatment-control group comparison analyses

Dependent Variable	Groups	Mann-Whitney U test		Independent t-test <sup>b</sup> (Two-Tailed)		
		Z score	p	T score	df	p
Family Resilience	Treatment	-3.244	0.001 <sup>a</sup>	2.728	38	0.010
	Control	-0.136	0.892			
Disaster Preparedness	Treatment	-3.474	0.001 <sup>a</sup>	2.928	38	0.006
	Control	-0.927	0.354			

a. Not corrected for ties  
b. T table = 2.024

**Table 4.** Variable coping treatment-control group comparison analyses

Dependent Variable	Groups	Paired t-test <sup>a</sup>			Independent t-test <sup>b</sup> (Two-Tailed)		
		T score	df	p	T score	df	p
Coping	Treatment	-9.609	19	0.007	5.742	38	0.000
	Control	-0.744	19	0.014			

a. No statistics are computed for one or more split files  
b. T table = 2.024

**The effect on coping**

The treatment and control groups showed significant comparative statistical results  $p = 0.007$  ( $\alpha \leq 0.05$ ) and  $p = 0.014$  ( $\alpha \leq 0.05$ ), respectively. This means that the two groups showed significant differences in values. So, it can be said that coping is decreasing in both groups. But difference between mean and SD differences occurred where the treatment group ( $5.050 \pm 2.350$ ) had a difference that was greater than the control group ( $0.450 \pm 2.704$ ) with  $p = 0.000$  ( $\alpha \leq 0.05$ ). This means that there is a significant increase in measurements after treatment. The results of the independent t-test statistic on the difference between pre and post treatment measurements obtained T value = 5.742 (T table = 2.024) and p value = 0.000 ( $\alpha \leq 0.05$ ). It was concluded that there were significant differences between the control group and the treatment group (Table 4).

**The effect on disaster preparedness**

Paired comparison test results show different values between the treatment and control groups. The treatment group has a value of  $p = 0.001$  ( $\alpha \leq 0.05$ ), which means that there are significant differences between measurements before and after treatment, while the value of the control group did not show a significant difference. Independent t-test found the value of T = 2.928 (T table = 2.024) and p value = 0.006 ( $\alpha \leq 0.05$ ). There is a significant difference between the groups treated and not treated (Table 3).

**DISCUSSION**

**The increase in family resilience**

Families who received treatment form mature evacuation systems that have mitigated and prepared their evacuation routes said that the action could make them calmer because they already knew where the evacuation route was in looking for help if needed in a disaster

situation. Walsh (2016) said that one of the dimensions of the protection factor is family system resources. Family system resources is a form of family readiness that comes from a good family system (10,13). Islamic caring plays a role in empowering and raising families to carry out their religious rituals routinely by emphasizing submission, sincerity and maintaining a high level of confidence that all problems faced must have a solution. Armed with optimism, the family will have a high spirit to endeavor to find solutions to all problems experienced.

**The increase in coping**

Respondents who always performed Islamic religious rituals had an average coping score of 93% over the frequent and rare categories; 75% of respondents who achieved maximum coping value also came from respondents in the category of always doing Islamic religious rituals. Literature review says that a Muslim's belief is that a problem, illness, or pressure is a trial or blessing from God. The problems that occur in vulnerable families increase family confidence to seek God's help by increasing their spirituality in the form of worship (14). The peace of mind described by the study makes the patient feel comfortable and can rule out pain and thoughts that prevent him from sleeping soundly (15). Spirituality helps respondents to achieve peace of mind by putting aside negative thoughts. Vulnerable families who are also survivors of disaster have accumulated acute and chronic stressors that prevent them from thinking clearly. Before being given FRCI training, respondents who already had high levels of Islamic religious rituals had not been able to form a focus in solving their problems. However, after the FRCI training was given, the respondents were able to think clearly and focus on disaster preparedness.

### The increase in disaster preparedness

The results showed that the effect of FRCI training increased preparedness. After the intervention, the group experienced an average increase in disaster preparedness, whereas respondents in the control group only increased slightly. The disaster education program for residents of Baan Mankong, Thailand is changing the behavior of residents to want to invest in disaster preparedness. The education by the government focuses on the experience and capabilities of the community demographically (16). The second phase of FRCI training focuses on exploring family experiences related to disasters. Families who are also survivors of a disaster will be invited to recall the shape of the disaster and family actions in dealing with the effects of the disaster. Families are invited to remember actions when a disaster occurs until the disaster is over and a form of rehabilitation of family-owned infrastructure. The family realizes that past disasters have become very useful experiences to be able to formulate good preparedness steps to deal with disasters in the future.

### CONCLUSION

Islamic-Based Family Resilience Training is effective to increase family resilience, coping, and disaster preparedness in the family that lives in a disaster-prone area. The family coping is developed because spirituality leads the family into a positive transcendence. The positivity helps the family into shaping an adaptive coping. The disaster preparedness is well-promoted if the family can recall all the memory of previous disaster. Family resilience, coping, and disaster preparedness are subject of change when Islamic-Based Family Resilience Training is implemented.

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