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 was 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, 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 worshiping 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 hardship 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**

<table>
<thead>
<tr>
<th>Group</th>
<th>Respondent Characteristics</th>
<th>Mean or Mode</th>
<th>SD</th>
<th>Normality test (Shapiro Wilk)</th>
<th>Homogeneity Test</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>S*</td>
<td>SE*</td>
</tr>
<tr>
<td>Control</td>
<td>Gender</td>
<td>Male***</td>
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<td>0.512</td>
<td>4.146</td>
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<tr>
<td></td>
<td></td>
<td>Female***</td>
<td>2.888</td>
<td>0.512</td>
<td>5.640</td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td>36.6</td>
<td>11.896</td>
<td>0.663</td>
<td>0.512</td>
</tr>
<tr>
<td></td>
<td>40.9</td>
<td>6.215</td>
<td>0.074</td>
<td>0.512</td>
<td>1.294</td>
</tr>
<tr>
<td>Treatment</td>
<td>Occupation</td>
<td>School***</td>
<td>-</td>
<td>0.512</td>
<td>0.144</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Entrepreneur</td>
<td>0.609</td>
<td>0.512</td>
<td>0.121</td>
</tr>
<tr>
<td></td>
<td>Education Background</td>
<td>Elementary School***</td>
<td>0.146</td>
<td>0.512</td>
<td>1.189</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Senior High School***</td>
<td>0.108</td>
<td>0.512</td>
<td>0.285</td>
</tr>
<tr>
<td>Treatment</td>
<td>Worship habitual</td>
<td>Always***</td>
<td>0.681</td>
<td>0.512</td>
<td>0.210</td>
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<tr>
<td></td>
<td></td>
<td>Often***</td>
<td>0.000</td>
<td>0.512</td>
<td>1.330</td>
</tr>
</tbody>
</table>

**Table Information:**

- S = Skewness
- SE = Std. Error = | S / SE | < 2 = Normal
- S / SE = Skewness / Std. Error
- Homogent = α > 0.05
- ** Homogeneity = α ≤ 0.05

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

<table>
<thead>
<tr>
<th>Group</th>
<th>Resilience</th>
<th>Shapiro-Wilk</th>
<th>Meaning</th>
<th>Levene’s test Sig.**</th>
<th>Meaning</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Statistic</td>
<td>df</td>
<td>Sig.*</td>
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<tr>
<td>Treatment</td>
<td>Family Resilience</td>
<td>Pre</td>
<td>65.75</td>
<td>8.258</td>
<td>0.775</td>
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<td>Post</td>
<td>72.15</td>
<td>5.641</td>
<td>0.921</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td>Pre</td>
<td>60.70</td>
<td>13.704</td>
<td>0.921</td>
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<td></td>
<td></td>
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<td>61.85</td>
<td>8.481</td>
<td>0.968</td>
</tr>
<tr>
<td>Treatment</td>
<td>Coping</td>
<td>Pre</td>
<td>30.95</td>
<td>2.564</td>
<td>0.967</td>
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<tr>
<td></td>
<td></td>
<td>Post</td>
<td>36</td>
<td>2.575</td>
<td>0.967</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td>Pre</td>
<td>31.15</td>
<td>3.066</td>
<td>0.968</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post</td>
<td>31.6</td>
<td>2.458</td>
<td>0.968</td>
</tr>
<tr>
<td>Treatment</td>
<td>Cortisol</td>
<td>Pre</td>
<td>23.93</td>
<td>9.872</td>
<td>0.848</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Post</td>
<td>17.68</td>
<td>5.653</td>
<td>0.848</td>
</tr>
<tr>
<td>Control</td>
<td></td>
<td>Pre</td>
<td>17.15</td>
<td>7.582</td>
<td>0.956</td>
</tr>
</tbody>
</table>
The effect on coping
The treatment and control groups showed significant comparative statistical results, p = 0.007 (α ≤ 0.05) and p = 0.014 (α ≤ 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 ± 2.350) had a difference that was greater than the control group (0.450 ± 2.704) with p = 0.000 (α ≤ 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 (α ≤ 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 (α ≤ 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 (α ≤ 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 disaster preparedness
The effect on disaster preparedness is significant, especially when comparing family resilience and coping. There are significant differences between the control and treatment groups. The treatment group showed different values for disaster preparedness, where there are significant differences between the control group (0.450 ± 2.350) and Treatment group (5.050 ± 2.350) with p value = 0.000 (α ≤ 0.05). 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 ± 2.350) had a difference that was greater than the control group (0.450 ± 2.704) with p = 0.000 (α ≤ 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 (α ≤ 0.05). It was concluded that there were significant differences between the control group and the treatment group (Table 4).

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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 Manlong, 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 events of previous disasters. Family resilience, coping, and disaster preparedness are subject of change when Islamic-Based Family Resilience Training is implemented.

REFERENCES