

Resilience in Acehese Teenagers Post Earthquake Disaster

Budi Satria¹, Khalid Aqmal², Yuswardi³, Juanita⁴

¹Department of Community Nursing Science, Faculty of Nursing, Universitas Syiah Kuala, Banda Aceh, Indonesia

²Student of Nursing Science Study Program, Faculty of Nursing, Universitas Syiah Kuala, Banda Aceh, Indonesia

³Fundamental & Management Nursing Department, Faculty of Nursing, Universitas Syiah Kuala, Banda Aceh, Indonesia

⁴Department Geriatric of Nursing, Faculty of Nursing, Universitas Syiah Kuala, Banda Aceh, Indonesia

Corresponding Author: Yuswardi

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ABSTRACT

After the earthquake and tsunami in 2004, Aceh Province experienced another earthquake of 6.5 Richter scale hitting Bireuen, Pidie Jaya, and Pidie Districts in December 2016. The disaster had caused some psychological problems in the teenagers living in several boarding schools in these regions. To deal with this, measures should be taken to bring the teenagers' mental condition back to normal with an effort known as resilience. This study concerned on the resilience of the teenagers studying in the boarding schools of the 2016 earthquake affected areas. The study aimed to investigate the teenagers' responses who, at the time of the disaster, lived separately from the family. The responses could help provided a post-disaster description of resilience in the teenagers. The population of the study included all students at Samalanga Traditional Islamic Boarding School in Bireuen District, Aceh Province. The sample consisted of 301 respondents obtained by using the simple random sampling technique. Data were collected by disseminating the questionnaires. The data were then analyzed by using univariate analysis. The results revealed that the resilience of the teenagers at Samalanga Boarding School was high, reaching 99% (298 people). It is expected that the boarding school continue to optimize their psychological support towards the teenagers by providing the Adolescent Health Care Service and also the Student Health Unit programs.

Keywords: earthquake, resilience, youth, Islamic boarding school

INTRODUCTION

In 2016, the National Disaster Management Agency conducted an assessment of disaster risks, potential numbers of people exposed to disaster risks, and moderate to high physical, economic and environmental losses. Disaster management is an issue that needs to be paid attention by all parties since everyone may be at a risk of potential disasters. Therefore, all parties should share roles and responsibilities in order to improve public preparedness and awareness. In general, awareness, alertness and preparedness must be instilled and developed through regular training as what Japan, the United States, Germany, South Korea and several countries in Europe have done; thus, Indonesia must also learn from the experiences of several disaster-prone developed countries [1]. On December 7, 2016, Pidie, Pidie Jaya and Bireun Districts was struck by an earthquake with a magnitude of 6.5 on the Richter scale. The occurrence of a disaster often results in trauma to the disaster victims, including teenagers. A study by Eksi[2] found that adolescents experienced depression after the Marmara earthquake in Turkey. Thus, resilience, an attempt to evoke mental

toughness, is deemed necessary. The aspects of resilience, according to Reivich and Shatte[3] consist of seven abilities: first, *emotional regulation*, a useful ability to remain calm even when faced with difficulties and challenges and stay focused on goals; second, *impulse control*, an ability for controlling the desires, impulses, difficulties and pressures that exist in an individual and for preventing mistakes in thinking; third, *causal analysis*, an ability in identifying the cause of a problem accurately in order not to repeat the same mistakes; fourth, *self-efficacy*, an ability to possess confidence to deal with problems and solve them effectively and successfully, and to have a commitment to solve the problems; fifth, *optimism*, an ability to keep having positive thinking towards the future and to be realistic in planning so that an individual believes that he/she is able to deal with the problems; sixth, *empathy*, an ability in identifying the behavior of others to understand the psychological and emotional signs as well as the non-verbal signs; and seventh, *reaching out*, an ability useful to improve the positive aspects of life so that it can enrich one's life, deepen relationships and seek new experiences.

Research related to the impact of disasters on adolescents is still limited because adolescents are often put in the same category as adults. Adolescents are also considered to have a broader assessment of disasters as well as their effects on them, by which they better understand the meaning of trauma. Adolescent responses to disasters show their perspectives on the future, along with negative expectations and attitude changes about career goals and also marriage. Long-term planning will be lost in some teenagers who lose their trust [2]. Several studies have shown that in the aftermath of a disaster many adolescents experienced depression and anxiety; furthermore, adolescents aged 12-15 are more vulnerable than their younger counterparts [2]. The level of depression is also higher in young female victims compared to that in young men. The 6.4

magnitude earthquake had caused the school building to be severely damaged and the female students also suffered from minor to severe injuries. This present study was conducted on a number of adolescents because we assumed that adolescents were a subject that had not been much studied in terms of the response to disasters. In addition, our study focused on the teenagers living in a boarding school since we believed that those living without their families at the time of disasters would respond differently from those living with their families.

METHOD

This study employed a descriptive method with the cross sectional study design. This method was used to see the description of the teenagers' resilience living in a boarding school. The sample was selected by using the simple random sampling technique with the Lemeshow formula, gaining a total of 329 respondents. The data collection was carried out within four days as allowed by the school, collecting as many as 301 responses, and due to the school's time constraint, we decided not to seek the responses from the remaining 28 respondents (8.51%).

Study arrangement

Indonesia is a country situated at the confluence of three tectonic plates of the world, including the Pacific plate, the Australian plate, and the Eurasian and Philippine plates, making Indonesia vulnerable to disasters. Every year Indonesia experiences around 4,000 earthquakes, with about 70-100 earthquakes can be felt by humans measured at <5.5 on the Richter scale and 1-2 destructive earthquakes. Indonesia has recorded that there were 186 destructive tectonic earthquakes happened between 1991 and 2011.

Data collection

Data collection was done by disseminating a questionnaire adapted from Sari & Satria

(2017). The data collection was carried out from April 22 to April 25, 2019 at the Ma'hadal 'Ulum Ad Diniyyah Al Islamiyah (MUDI) Masjid Raya Samalanga, a traditional Islamic boarding school (pesantren) in Bireuen District, Aceh Province, with the help of enumerators and two school teachers. The respondents were asked to gather in the school's hall after we gained their approval to take part in the study. The respondents were then given the questionnaire and the enumerators explained to them how to fill out the questionnaire items. The questionnaires were further checked for the completeness of the answers.

Data analysis

Data analysis was done by using univariate analysis. Univariate analysis was used to calculate the frequency distribution and percentage of variables and sub variables of resilience capabilities.

RESULTS

Table 1 below describes the demography of the respondents. It can be seen that the respondents belonged to the late adolescence group, aged 19. In terms of gender, the majority of the respondents were female with 151 people (50.2%), whereas in relation to the level of education, the respondents were mostly undergraduates with 201 people (67.4%).

Table 1. Youth Demographics (n=301)

Demographic Data	f	%
Age		
Late Adolescence (aged 17-25)	301	100
Aged 17 years	36	12.0
Aged 18 years	42	14.0
Aged 19 years	81	26.9
Aged 20 years	28	9.3
Aged 21 years	67	22.3
Aged 22 years	38	12.6
Aged 23 years	9	3.0
Gender		
Male	150	49.8
Female	151	50.2
Level of Education		
High school student	98	32.6
Undergraduate student	20	67.4

Table 2. Descriptive Statistics of Teenagers' Resilience Ability (n=301)

No.	Resilience	f	%
1.	Low	3	1.0
2.	High	298	99.0

Table 2 above shows that as many as 298 respondents (99.0 %) were highly resilient.

Table 3. Descriptive Statistics of Sub-Variabels of Teenagers' Resilience Ability (n=301)

Teenagers' Resilience Ability	f	%
Emotional Regulation		
Low	5	1.7
High	296	98.3
Impulse Control		
Low	5	1.7
High	296	98.3
Optimism		
Low	5	1.7
High	296	98.3
Causal Analysis		
Low	32	10.6
High	269	89.4
Empathy		
Low	18	6.0
High	283	94.0
Self-Efficacy		
Low	18	6.0
High	283	94.0
Reaching Out		
Low	22	7.3
High	279	92.7

DISCUSSION

Our study revealed that the teenagers' resilience after the earthquake was quite high, as shown in table 2. Resilience, according to Reivich and Shatte in Taufiq, Susanty, and Nurlia[3], refers to the ability to adapt and remain strong in the face of difficulties. The finding of this study was in line with the study conducted by Dina[4] on the resilience of Acehese adolescents who suffered from the tsunami disaster. Her study aimed to identify the resilience in adolescent survivors of the earthquake and tsunami, in which it was found that most of the survivors had moderate resilience scores and some even had high scores.

Some studies state that adolescents' abilities in post-disaster mental growth and resilience are likely to relate with the developmental process of adapting positively to adversity, and from a number of research it has been suggested that most adolescents and prospective medical students were willing to be volunteers for disaster mitigation [5]. On the other hand, Frankenberg, Sikoki, Sumantri, Suriastini, & Thomas[6] argue that the level of education affects the recovery of psychosocial health in victims after the

tsunami disaster. Gender is also one of the factors that influence the disaster experience and resilience, in which females are at a higher risk or more prone to disasters than males [7].

Our findings indicated that in general the teenagers at Samalanga boarding school showed good or high ability in emotional regulation, with a total of 296 people (98.3%) (see table 3). Emotional regulation is an important ability for adolescents in order to stay calm even during pressure. Resilient individuals are able to control their emotions, especially when dealing with difficulties and challenges, and to stay focused on their goals [3]. Our finding was also supported by research conducted by Aini and Husna [8] on emotional regulation ability at Gampong Bunga. They found that some people after flood disaster showed a good emotional control, which was highly influenced by age and religiosity that taught them on how to handle their emotions. Late adolescents, in this case, are very likely to have more control on their emotions; moreover, the teenagers in this study had learned religious teachings at school, suggesting that they could properly handle their emotions in order not to defy the religious teachings.

In terms of impulse control, the teenagers were also found to have a very good self-control after the disaster of 296 people (98.3%) as seen in table 3. Impulse control is defined as an ability in controlling the desires, impulses, difficulties, and pressures that exist within an individual (Reivich & Shatte in Taufiq [3]). This finding was similar to what Taufiq [3] had found concerning the children resilience after flood disaster in Dayeuhkolot Village, Bandung District of West Java Province. Their study showed that the children had a high ability in impulse control.

Further, in relation with the optimism aspect, this study revealed that the majority of the teenagers, a total of 296 people or 98.3%, were highly optimistic. Reivich and Shatte in Taufiq[3] remark that optimism is an ability in thinking positively about the

future and in realistically planning in order to ensure that he/she is able to deal with any problem. The optimism and anxiety in earthquake survivors revealed that optimism and anxiety were correlated. On the resilience of Acehese women in coping with disasters reported that there was a relationship between optimism and resilience of individuals [9].

CONCLUSION

Our study concludes that the resilience in adolescents after the earthquake in Samalanga Islamic boarding school in 2019 was considerably high. It was supported by some positive findings in each component of resilience, such as high emotional regulation (98.3%), high impulse control (98.3%), high optimism (98.3%), high causal analysis (89.4 %), high empathy (94%), high self-efficacy (94%), and high reaching out (92.7%). With such a high level of resilience, it is hoped that the school management and the caretakers retain this good ability through the Community Health Center (Puskesmas) programs on adolescents, such as Adolescent Health Care Service (*Pelayanan Kesehatan Peduli Remaja/PKPR*) and Student Health Unit (*Unit Kesehatan Siswa/UKS*).

Declaration by Authors

Ethical Approval: Data collection was done after obtaining an approval for passing the research ethics examination from the Research Ethics Committee of the Faculty of Nursing, Syiah Kuala University.

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