

ORIGINAL ARTICLES

THE PRESENCE OF POST-TRAUMATIC STRESS DISORDER (PTSD) LEVEL AT LOMBOK EARTHQUAKE SURVIVORS

Primalova Septiavy Estiadewi^{1*}, Shrimarti Rukmini Devy², Hanik Endang Nihayati, Ah. Yusuf³

1. Master Student in Nursing, Faculty of Nursing, Universitas Airlangga, Surabaya, Indonesia
2. Faculty of Public Health, Universitas Airlangga, Surabaya, *Indonesia*
3. Department of Mental Health and Community Health Nursing, Faculty of Nursing, Universitas Airlangga, Surabaya, Surabaya

* Correspondence: primalova.septiavy.estiadewi-2017@fkip.unair.ac.id

Abstract

Lombok earthquake was one of the major earthquakes that occurred in Indonesia. Earthquakes have caused many deaths, and injuries also made survivors are at risk of suffering from trauma-related mental health disorders such as Posttraumatic Stress Disorder (PTSD), which shows several symptoms in the form of re-experiencing, avoidance, negative changes in mood and cognition, and hyperarousal. This study aimed to describe the incidence of trauma at six months after the Lombok earthquake. This study was a descriptive study with a cross-sectional approach. There were 136 survivors of the Lombok earthquake who were the subjects of the study. The technique of taking a research survivor using a purposive sampling technique. The instrument was using the Impact of Event Scale (IES). Data were analyzed descriptively using numbers and percentages. PTSD can occur in all men and women in adulthood. Employment status, location of residence, and exposure to trauma recovery after six months of disaster are aspects that need to be considered in determining the incidence of PTSD. After six months, the Lombok earthquake was still found by survivors who had a moderate PTSD. Survivors of natural earthquake disasters need psychological therapy to reduce the impact of post-disaster trauma.

Keywords: disaster, post-traumatic stress disorder, PTSD, survivors

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Introduction

Indonesia is one of the countries in the world that is often hit by disasters. According to the Centre for Research on the Epidemiology of Disasters (2017), Indonesia is ranked 12th in the country with the highest number of disaster events in the world [1]. Indonesia lies in a series of rings of fire that stretch along with the Pacific plate, which is the most active tectonic plate in the world. This zone contributes to almost 90% of earthquake events on earth, and nearly all of them are significant earthquakes in the world [2].

The natural disaster of the earthquake that hit the province of West Nusa Tenggara, especially the island of Lombok, was one of the major earthquakes that occurred in

Indonesia. On July 29, 2016, at 6:45 a.m., there was an earthquake with a magnitude of 6.4 on the Richter scale, and there were several aftershocks, one of which powerful aftershocks occurred on August 5, 2018, with 7 Richter scale. The earthquake left 555 people dead, hundreds of injured, and hundreds of thousands of homes and public facilities damaged [3].

Earthquakes have caused many deaths and injuries and made survivors survive with prolonged panic and some mental problems, including PTSD [4]. PTSD is a maladaptive reaction, and psychological disorder that most often occurs during an earthquake with an incidence of more than 60% in the world after a disaster occurs [5,6]. World Health Organization (2013) states that after the occurrence of a catastrophic event, most of the disaster-affected population have normal psychological reactions, around 15-20% will experience mild or moderate mental disorders that refer to PTSD conditions, while 3-4% experience severe disorders such as psychosis, severe depression, and high anxiety. PTSD has a lifetime prevalence of around 6.8% in the general population [7].

PTSD is severe, debilitating, and, when not treated, symptoms of anxiety can develop into chronic and severely endanger the quality of life of individuals [8]. PTSD is characterized by constant anxiety and reliving traumatic events for more than a month after the event; besides that, the main symptoms of PTSD are a group of persistent arousal hyper symptoms, repeated intrusion repetition symptoms, and numbness reaction groups [9]. PTSD can occur in a day, week, month, a year, or many years after trauma [10]. Previous research conducted by Endiyono (2010) on survivors after four months of natural disasters landslides in Banjarnegara district stated that most victims of natural disasters experienced PTSD [11]. Goa (2014) reports that 34.2% of adolescents still experience PTSD after the 8-year Nias earthquake [12]. Therefore, the importance of exploring the incidence of PTSD six months after the disaster.

Objectives

This study aimed to describe the level of post-traumatic stress at six months after the Lombok earthquake.

Methods

This study was a descriptive study with a cross-sectional approach. The populations in this study were survivors of natural earthquake disasters in Lombok. Using a purposive sampling technique, we recruited 136 samples in this study. The inclusion criteria in this study were > 17 years old and a survivor of the Lombok earthquake. The instrument was using the Impact of Event Scale (IES) with scoring ≤ 12 was mild traumatic, 13-32 was moderate traumatic, and ≥ 33 was severe traumatic (PTSD) [13]. Data were analyzed descriptively using numbers and percentages. This study was granted ethical approval by the Ethical Committee of Health Research in the Faculty of Nursing, Universitas Airlangga No. 1269-KEPK.

Results

Characteristics of earthquake survivor based on socio-demographic

The results of the study showed that there were as many male respondents as there were female respondents. The majority of respondents aged 26-35 years were 73 respondents (46.3%). Most of the respondents were working as many as 132 respondents (97.1%). Most of the respondents occupied their own homes after the six months of the earthquake disaster, as many as 104 respondents (76.1%). Most of the respondents did not get post-earthquake trauma healing, which was 78 respondents (57.4%)

Table 1. *Characteristics of earthquake survivors based on socio-demographic*

Characteristic	n	%
Gender		
Male	68	50%
Female	68	50%
Age		
17-25 years	49	33%
26 - 35 years	73	46,3%
36 - 45 years	4	14,7%
46 - 55 years	5	3,7%
56 - 65 years	4	1,5%
>65 years	1	0,8%
Occupational status		
Employed	132	97,1%
Unemployed	4	2,9%
Residence 6 months after the disaster		
Private house	104	76,1%
Refugees	32	23,9%
Previous treatment		
Yes	58	42,6%
No	78	57,4%

Level of post-traumatic stress

Table 2 describes the IES-R score obtained from the measurement results. The majority of respondents who diagnosed PTSD are in moderate trauma category of 84 respondents (61.7%), mild trauma category was 34 respondents (25%), and severe trauma category was 18 respondents (13.3%).

Table 2. Level of post-traumatic stress-based IES-R scores and PTSD diagnostic

Score IES-R	n	%	Category
24-32	34	25	Mild trauma
33-36	84	61,7	Moderate trauma
> 37	18	13.3	Severe trauma

Discussion

This study aims to describe the incidence of injury six months after the Lombok earthquake. The majority of respondents experienced PTSD on a moderate trauma scale. Symptoms of PTSD can last for months or even years after a traumatic event. The study by Kun *et al.* (2009) reported PTSD prevalence rates reaching 45.5% in areas that were severely damaged in the earthquake area 6 months after the incident. Symptoms of PTSD are generally grouped into four types: disturbing memory, avoidance, negative changes in thought and mood, and changes in physical and emotional reactions. Symptoms can vary over time and vary from person to person [15]. Most survivors experience traumatic events because they have difficulty adjusting and overcoming problems.

In this study, men and women were equally vulnerable to PTSD. Some studies [16,17] show that women tend to show more symptoms of PTSD. According to the study by Dai *et al.* (2016), the incidence of PTSD among women who survived after the earthquake was higher than that of men. Women tend to show more disturbing thoughts and higher alertness and avoidance behaviors. As a result, women are at higher risk than men who have PTSD after an earthquake.

Regarding age, the results of this study indicate that people in the age group 25-35 are the most affected by posttraumatic symptoms compared to other age groups. These results are consistent with [19] finding that adult groups are more susceptible to posttraumatic symptoms after natural disasters than different ages. People in this middle age group are usually the primary breadwinners of their families, especially men. Various pressures, such as work, family needs, and reconstruction of their homes, which may cause a higher level of PTSD symptoms among this group.

Occupational status influences further stress and can trigger feelings of insecurity and comfort. In overcoming PTSD, individuals who have jobs will be slower than those who do not have jobs. Individuals who have jobs have many stressors apart from work, home life, or problems with the environment, while individuals who do not have jobs have fewer stressors so that they can focus on the issue, and this will reduce the signs and symptoms PTSD [20]. In a state of trauma recovery, individuals will be susceptible in the presence of a stressor, many of the least stressors they face will determine how their self-copying mechanisms are handled.

Most respondents have returned to live in private homes [21]. Rates of mental health disorders, such as disorders, posttraumatic stress disorder (PTSD), and depression are higher among the refugee population compared to the general population [22]. Evacuation is a big challenge for meeting health care needs in areas that require emergency coverage. In this study, the participation of survivors returned to private homes to reduce stress on difficulties and be able to reorganize their lives for the better.

Most of the respondents did not get trauma handling therapy. The benefits of handling trauma include psychological prevention, psychoeducation, self-management of

responding to stress, anxiety reduction, relaxation techniques, coping strategies, and identifying thoughts, emotions, and body tensions, choosing ways of acting, attention control, emotional control, and regulation [23]. Individuals who do not get trauma treatment will be slow to cope with post-disaster PTSD; this is because there is no internal stress management that supports the reduced impact of PTSD due to disasters while individuals who are treated with trauma are helped to identify and modify excessive negative cognition belief) which leads to disturbing emotions and disruption of function, so that it will be able to help individuals in dealing with PTSD.

Conclusions

The gender, age, occupational status, residence six months after the disaster, and previous treatment are related to the incidence of PTSD. It is essential to encourage survivors to get psychological treatment to decrease symptoms of PTSD. The limitation of this study is not to explore the psycho-social aspect, so further research is needed.

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