

SELF MASTERY THROUGH ACTIVE COPING STRATEGY TO SUBJECT WITH POST-TRAUMATIC STRESS DISORDER (CASE STUDY: WOMAN VICTIM OF EARTH QUAKE)

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ABSTRACT

Being a victim of the earthquake can have a terrible impact or threaten the safety of one's soul. The natural disasters can also be a traumatic event affecting the in-depth and long psychological impact which direct to Post-Traumatic Stress Disorder (PTSD). This study generally aimed to identify and understand the PTSD symptoms in earthquake victim. The specific purpose was training self-control technique in earthquake victim; therefore, they would be able to respond towards PTSD symptoms adaptively, and understand the effectiveness of active coping strategies to decrease the PTSD symptoms. The hypothesis of this study was the victim's PTSD symptoms was lessened or reduced after applying active coping strategies therapy. The participant of this study was a woman who was the victim of earthquake and had the signed informed consent statement. The data were analyzed by non-parametric Wilcoxon Signed Ranks Test and was qualitatively analyzed. (one-tail $p = 0.002$, $p < 0.05$). The quantitative result showed that there was the decrease of PTSD symptoms of the earthquake victim after implementing active coping strategies. This result was consistent with the qualitative data. The qualitative analysis found that the subject was able to be more appropriate to find ways of coping actively as a means of responding PTSD symptoms and was able to keep herself calm. The research finding limitations and recommendations were further discussed.

Keywords: post-traumatic stress disorder (PTSD), earthquake victims, active coping

Presenting Author's biography



The first presenters named Ema Zati Baroroh. She was 23 years old and completed her Bachelor's Degree at the Indonesian Islamic University (UII). She is currently a Master of Professional Psychology student of Muhammadiyah University of Surakarta. In addition, she is also interested to be active in the organization and conduct her research specifically related to Islamic psychology, as well as attending scientific forum. At a fairly young age, she already has three research published in a national seminar and are also published in the proceedings journals.

INTRODUCTION

Indonesia is susceptible areas and quite often to have earthquakes. Some of the big earthquakes are the earthquake from 9.1 to 9.3 magnitudes in the Indian Ocean in 2004 or known as tsunami, 6.2 magnitude earthquake in Jogjakarta in 2006, the Earthquakes in Bengkulu 7.1 to 8.5 magnitude in 2007, and several other earthquakes. When we talk about the earthquake, we also talk about the losses and the impacts. The losses on earthquakes occurrence did not only concerns about the loss of property, homes, livestock, securities, and the others, but actually there is another loss that is equally great and dangerous: the vulnerability of a psychological disorder. Unfortunately, people's attention in handling this problem is still lesser than the material loss. This was also consistent with the data presented by Iswanti, et al (in Astuti, 2006) that there were 1 million people to 1.2 million people who suffered from psychological burden from moderate to severe levels. Of these numbers, 97.5% recover naturally within two weeks, 2.5% or 30 thousand people experienced psychological difficulties until three months after the earthquake, and as much as 1% or 12 thousand people experienced more on long term. The exposure to the data above certainly points that this problem can not be underestimated. The government both on central and local levels, Vilantropi, and CSR, They should not only focus on the infrastructure recovery but also on the maintenance of psychological needs after the disaster. However, it is important to minimize the number of psychological impact that may accompany a disastersurvivor until 0%. Thus, of course, we all agree that being a victim of the earthquake can have a terrible impact or threaten the safety of one's soul. One of the difficulties and psychological disorder that may occur after the disaster is Post Traumatic Stress Disorder or commonly abbreviated as PTSD.

Posttraumatic Stress Disorder, or PTSD, is a mental health problem that can occur following a direct experience or witnessing of life-threatening events such as military combat, natural disasters, terrorist attacks, serious accidents, or violent personal assaults like rape (National Center For PTSD, 2011). In other words, the natural disasters also can be a traumatic event that affects indepth and long psychological impact. The DSM IV-TR mentioned some diagnostic criteria for Post Traumatic Stress; they are re-experience symptoms (re-experiencing) such as nightmares or flashbacks, avoidance, and awareness of the excess and (hyperarousal) such as anger, sleep disorders, and panic that lasted for more than one month. The specific symptoms that could last between 1-3 months are included as acute symptoms; and if more than three months, they are included as chronic symptoms. Nonetheless both acute and chronic symptoms are also the symptom of post-traumatic stress (PTSD).

In line with the description above, the researchers also found some other facts about this unresolved issue. In the data reported by WHO at 2000, it stated that people with PTSD ranged from 10% to 20%. In addition, an estimated 50% of the population in the affected areas experience the significant stress, and as many as 10%-30% of those who experienced traumatic events will suffer from PTSD (Erwina, 2010). Besides, the qualitative study conducted by Indriati and Betty (2008) based on the analysis of interviews of the subject and two significant others found that the subject also experienced post-traumatic stress after an incident involving the Yogyakarta earthquake that occurred on May 27th, 2006. This unresolved problem should be minimized and should not happen because by allowing or underestimate disturbance, it will bring a greater impact.

One of the physical effects disclosed by Grinage (Anggadewi, &Handriami, January 3st, 2016) that people with the symptoms of post-traumatic stress often exhibited excessive

reaction due to the changes in the neurobiological on his nervous system. Also, according to the Sleep Health Foundation (2012), there may be sleep problems that could be associated with PTSD for the example poor sleep, nightmares, or other sleep disorder. For the person with PTSD, mentally reliving a traumatic event can be almost as stressful and frightening similar to the original event. In addition to the physical and psychological symptoms, there is often embarrassment, confusion, and frustration. Even though the disorder has very specific symptoms, PTSD is often misunderstood or misdiagnosed. It often places a strain on relationships, as many people will isolate and detach themselves from family, friends, and activities they once enjoyed (Anxiety and Depression Association of America, accessed 3-1-2016). In other words, according to the explanations above, those with PTSD, not only do with the difficulty of someone to face of certain trauma, but also more broadly, on the impact of having this disorder can also cause the sufferer to experience discomfort or other disorders that can accompany, both in terms of emotional, social, or changes in sleep rhythms. Therefore, based on the data and the facts above, it was inevitability that people with PTSD disorders require intervention in other to prevent more severe impact.

One alternative intervention that can be used is a coping strategy. According to previous studies conducted by Hertinjung (2011), the coping strategy was one of the potential factors for intervention, considering these factors affecting the individual in the face of stress at this time and a longer period. This was in line with the opinion from National Care for PTSD (2011) that when a trauma survivor took direct action to cope with problems, he or she often gained a greater sense of personal power and control. Active coping means recognizing and accepting the impact of traumatic experiences, and then taking concrete action to improve things. Thus, active coping abilities more or less are related to the possession or control of a person. Linkages between self mastery and PTSD, according to Hertinjung (2011) were the ability to control the appearance of symptoms of psychological disorders in the form of re-experiencing traumatic event, avoiding situations that could recall the traumatic event, as well as hyper-arousal. Thus, it is predicted that if someone has PTSD disorder, he or she can have a better self mastery that he or she expects to have an increased ability to be more helpful in controlling symptoms.

The strategy used to train and familiarize the subject of active coping is by using relaxation techniques. In Hertinjung study (2011), relaxation was effective to reduce the symptoms of PTSD in victims of sexual violence. This was the reason why researchers were interested in using active coping strategies by using relaxation techniques. However, there would be some changes and adjustments made in this research. Relaxation techniques which are used in this present study is the deep breathing relaxation techniques, muscle relaxation, and visualization techniques.

Referring to the various explanations of the datas and the facts above, the researchers were interested to know how active coping strategies by using relaxation techniques could provide self-control skills on earthquake victims suffering from PTSD. In addition, the researchers were also interested in knowing whether the active coping strategy could be a useful method and effective method in reducing the symptoms of PTSD of subject. Thus, this study generally aimed to identify and understand the PTSD symptoms in earthquake victim. The specific purpose of this study is training self-control technique in earthquake victim; therefore, they would be able to respond towards PTSD symptoms adaptively, and understand the effectiveness of active coping strategies to decrease the PTSD symptoms.

METHOD

Research Design

The study used purposive sampling in selection of the subject. This meant that the participants could be in accordance with the criteria desired by researchers. The criteria of subject in this study were early adult women aged 20-24 years old, had experienced or witnessed an earthquake, diagnosed with PTSD, and expressed willingness to contribute in the research. Then, the subject selection was conducted by using the initial assessment through interviews one week before the training. The interview was semi-structured interview about the experience of the subject to earthquake events. In addition, the researchers also checked the diagnosis using the DSM IV – TR.

In addition, the researchers used qualitative method as the method of data collection in the form of a scale or a questionnaire. The psychology scale method according Azwar (2010) was in the form of a construct or a psychological concept that described some aspects of the individual. This scale was provided with Davidson PTSD Scale to measure mastery of the subject and the symptoms of PTSD in the subject after the therapy sessions were conducted. It was assumed that the lower the scores of PTSD meant better self-control. Based on initial assessments elections, the researchers elected one subject who met the criteria proposed and expressed willingness.

This study was an experimental study by using the n - small one group pretest and posttest design that the experiment was conducted in a group without a comparison group. The variable in this study was an active coping strategies and self control. After the selection of research subject, the study continued with the therapy sessions. The treatment that would be given to the participants was active coping strategies through relaxation. The activities involved a therapist that serves to guide the implementation of this intervention. The duration of the training time was approximately 2.5 hours, totaling 3 times of treatment. Each treatment was given within 2 days. Then, on each meeting, there were 4 sessions and one follow-up session intervention. Further explanation of a series of therapy was described in the table below.

Tab. 1. Processed Data of The Subject's Quantitative Result

Day	Session Name	Purpose	Time (')
1	Opening	This phase was to measure the initial conditions of the subject before being given treatment	10
	Mastery recognize myself	The purpose of this stage to make subject able to reflect the way she used during all the time to face her fear of the earthquake	60
	Introduction Relaxation Techniques	Provides a preliminary understanding to the subject of the alternative ways of active coping by using relaxation techniques	45
	Reflection	To find out what the subject gained during one meeting	5
2	Studies Review	To request a review of the subject of the last meeting	15

	Deep breathing relaxation techniques	To provide a better understanding about deep breathing relaxation	45
	Muscle relaxation techniques	To provide a better understanding about Muscle relaxation techniques	45
	Reflection	To find out what the subject gained during one meeting.	15
3	Studies Review	To request a review of the subject of the last meeting	15
	Visualization techniques	To provide a better understanding about Visualization techniques	60
	Reflection	To find out what the subject gained during one meeting. Furthermore, it also helped the subject to reflect on the existence of God against her fear of earthquakes.	15
	Closing	To assist the subject in the form of commitment changes and also to evaluate the subject and training	15
4	Follow up Phase	To determine the effects of treatment on the subject condition after the untreated	45

The data processing methods of this study were qualitative and quantitative methods. The qualitative data were obtained by interview after the implementation of training and observation of the subject during the course of therapy, and monitoring of log book. On the other hand, quantitative data were processed with the analysis of non- parametric Wilcoxon Signed Ranks Test by using SPSS 17.0 for Windows. In order to ensure the quality of the desired treatment, the study also used an evaluation sheet on the training events provided by the research and was filled by the subject.

Hypothesis

The hypothesis of this study was the victim’s PTSD symptoms were getting low or significantly reduced after applying active coping strategies therapy. The participant of this study was a woman who was a victim of the earthquake and had signed informed consent statement.

ANAMNESIS RESULT

The subject’s initials was NF, she was 22 years old. She was currently a collage student of an X private university in Jogjakarta. When she met the researcher, she complained that she was very afraid of the earthquake and often felt like an earthquake shock. However, she also realized that it was not an actual earthquake. She was able to recognize the earthquake or not, by looking at the motion of water in a mineral water bottle or when she asked her friend. It was not enough to help though; she kept her misgivings, quite louder heartbeat than usual, sometimes accompanied by chest pain, and dizziness.

The subject then told the researcher that she ever experienced the Yogyakarta earthquake in 2006. At that time, she was told that was in 6th grade. At that moment during

the earthquake she felt the house as if shaking and swinging. This was the events in which she said as the cause of the complaint at this time. She always remembered the traumatic event. When reminded of the incident, she felt like crying and sudden sadness.

According to the subject, between 2006 and 2011, she never felt the quake. However, in 2012 the subject began to feel fear of earthquake in second semester at college. This was because in 2012 she felt a big earthquake, which made her recall the events of 2006. The subject found that she became worried because she thought there would be an earthquake as large as in 2006. Even though other people did not feel it, the subject is often suddenly feel the tremble like being swayed to the right and to the left. She was also afraid of the rumble that looked like an earthquake and vibration of the vehicle. Starting from that moment she was always scared of earthquake and felt like re-experiencing the earthquake. She also became more alert. The comparison of re-experiencing earthquake in daily conditions she felt it once, but it would be increased when she was depressed, in which she could feel at least 2-3 times a day. If she felt a big tremble then she would get panic attack, and crying. She also spontaneously ran away from her location if she re-experienced the earthquake. Some of the fear that she often felt were fear of collapse, fear that she could not run, and fear of death. However, these conditions especially made her more uncomfortable in the late 2013 – January 2016.

In line with the subject's description, the researchers also indicated that she had problems with certain trauma with a score of 12 by using Davidson PTSD Scale. The examination by using this scale was reinforced with a diagnosis of PTSD in DSM-IV - TR. After analyzing her complaint and the subject's anamnesis result, it was found that 5 of the 6 criteria were fulfilled; then, the diagnosis was straighten. The subjects sustained Chronic Post Traumatic Stress Disorder (309.81).

RESULT AND DISCUSSION

Qualitative And Quantitative The Data Processing

Qualitative

Tab 2. Data processing qualitative conclusions of participans

Pre Condition	Goal	Post Result		
		during the intervention process	Log Book Monitoring	Follow up Therapy Result
Frequent earthquakes were apparent and less able to control it	Although the subject still had PTSD symptoms, but the subject was able to have an active coping method	The subject did not feel the earthquake apparent when intervening. However, on the training session, the subject cried and panicked when she heard	Decreasing the apparent intensity of the earthquake and had an active coping skills better	Still felt the earthquake pseudo on small and large duration. But she was already able to control themselves better by using active coping

		the sound of earthquake. During the intervention, subject was able to practice almost all methods of relaxation well		
Often had the difficulty in having self-control to noise or vibration shapes as the reminiscent of earthquakes	The subject was able to better control herself, a minimum of not triggering panic attacks	On the second day at practice, the subject cried and gave rise to panic attack when she was shown a rumbling sound and video of the earthquake. However, during the sessions of the third day of reflection, the subject was able to have better self-control, quieter, and even was able to hear the rumble until the end of recording	At the time of reporting a homework assignment on the second day of training was given the subjects complained of feeling the vibrations on the previous day for two times. However, she said that at that time she was able to deal with a more relaxed and calm demeanor.	The subject was already able to have a way of self-control not only to face her PTSD symptoms but also in other conditions, such as sadness and anxiety
The subject said that if she remembered and felt the earthquake both false and real, she felt very scared. She could feel the fear, such as fear of collapse, fear that shou could not run, and the fear of death	The subject was able to have a slightly more positive view on earthquake	The subject had a more positive view of the earthquake. She claimed to be more able to interpret it with full protection to God that she felt no need to be overly afraid.		She still held the meaning learned in the previous sessions. There was also form of worship such as Quran recitations.

Based on the qualitative data on the general aspects of the subject there were differences from before and after therapy. The overall result was found that the subject was able to be have more appropriate way calmer in finding ways of coping actively as a means of responding PTSD symptoms and able to keep herself calm. The technique was to have deep breath relaxation and to listen to soft rhythmic music. After the treatment, the subject was also able to have a commitment to be better in managing emotions and self-control, be closer to God, and also in maintaining active coping strategies are studied not only for PTSD but also

were used when the subject was getting stress, anxiety, panic attacks. Thus, the qualitative data also found that the active coping form relaxation intervention had significant positive impact on the subject.

Quantitative

Tab 3. Data processing quantitative

Research variable	Descriptive Statistics		Score Transformation			Sig. (1-tailed)
	Mean	SD	Negative rank	Positive rank	Ties	
PTSD_Prettest	0,7059	0.46967				
PTSD_Posttest	0,1176	0.33211	11	1	5	0.002

The table above was a comparison of the processing table items scale. The table showed a decrease in PTSD symptoms experienced by the subject (earthquake victim) significantly under 0.05 level after getting the active coping strategies ($p = 0.002$, $p < 0.05$). In addition, there were decreased mean values of 11 indicators before and after implementation of the intervention; whereas, one has increased, and there were five indicators that had a fixed value.

Discussion

In general, our organized goals of this intervention were to identify and understand the PTSD symptoms in earthquake victim. The general objective was achieved with the method of assessment in the form of interviews and the use of a scale of PTSD Davidson to the subject. Through this method, the researchers would be able to understand the psychological dynamics of subject (could be viewed on the assessment). However, the researchers also persuaded the subject to understand what happened to her during this time. The steps were taken to explore the subject’s experience through two-way discussion between participants and therapists in the second session, on the first meeting. At the beginning of the meeting, subjects looked puzzled because she did not completely understand about what happened to her. The results were quite encouraging that after following the process she became more understanding of her experienced PTSD. She also learned to control of herself during this time. It was known through a variety of subject responses when discussion and log book were filled during therapy.

The specific objective of this intervention was training self-control technique in earthquake victim; therefore, she would be able to respond PTSD symptoms adaptively. In general, the results obtained stated that the subject was able to practice relaxation techniques to respond towards her PTSD symptoms. It was known by observation of researchers towards the exercise session of each technique. It was also known from reflections written in the log book every practiced.

The second goal was to understand the effectiveness of active coping strategies to decrease the PTSD symptoms. This objective was also successfully achieved based on the data processing pretest and posttest. This study found a decrease in the PTSD symptoms significantly (can be seen in Tab. 3). Besides, the quantitative data were also consistent with the qualitative data obtained in interviews and monitoring therapy logbook. In general, the subject was able to find a way of active coping to respond towards PTSD (can be seen in Tab.

2). Therefore, based on various explanation above it could be concluded that the researchers were able to achieve almost all of the general and specific objectives as well as able to receive the hypothesis.

Lyon (1993) explained that coping is a behavior that someone uses to respond to the demands or an oppressive demand. Before therapy, coping strategies that were used by the subject tended to avoid certain situations that may remind her with the traumatic event. This called maladaptive coping, which she most often to deal with PTSD. For example the dominant behavior of the subject, she would spontaneously run away from the location even though it does not harm her. This was according to a theory that people who have PTSD may feel stressed or frightened even when they are no longer in danger. (National Institute OF Mental Health, accessed on 3-1-2016). This means that people with PTSD disorders generally become easier to feel a sense of discomfort; therefore they are more inclined to avoid dealing with things that remind her of the trauma.

Therefore, what kind of coping strategies that can help people with PTSD? One approach is by using relaxation. This was according to the opinion of Utami (in Hertinjung, 2011) that the relaxation could also be used as an active coping skills if it was used to teach people when and how to apply relaxation under the conditions that caused anxiety. Thus, the key of this study emphasized the implementation of relaxation as one of the active coping skills. The relaxation skills should be implemented regularly; hence, it will be able to help control the symptoms of PTSD effectively. In addition, a greater impact is expected with practice will get ongoing experience about the effort to control themselves actively in reducing even preventing the onset of symptoms of her PTSD. It was also supported Vivyan's (2009) opinion that learning a relaxation technique will, help us unwind and bring our tensions and anxiety under control.

When viewed from the implementation of relaxation on the subject. Teaching of relaxation in this study was preceded by dropping relaxation techniques. In addition, each technique taught was preceded by theoretical explanations and practice would be under guidance. Then, it was deepened with practice sessions that the subject was asked to guide herself. The results of using the teaching model helped the subject to understand as a whole, both theoretical and able to practice. In addition, the researchers also gave a homework assignment, which was to apply relaxation techniques such as active coping response to PTSD symptoms appear. It was used to maintain the consistency of applying which had been studied during the training. If reviewed generally, the subject was able to practice various relaxation techniques that had been trained previously. However, from the three techniques taught, the most comfortable technique was using deep breathing relaxation than the other techniques. This was because according to the subject's opinion, these techniques can be used anywhere and easily. The most difficult technique is the visualization techniques. She said that she did not fit with these techniques due to her difficulty in imagining. Thus, in the end of the session subject free to choose the method of relaxation which the most suits with her.

In addition, another interesting thing to be discussed was the use of a combination with flooding method in a practice session. According to the opinion from Nevid, Rathus, and Greene (2005), flooding is a form of exposure technique in which subjects are exposed to hyperarousal stimuli in high level through an imagination or an actual. However, before using this technique, the researcher should be able to ensure that the subject truly understood and was able to practice each of the relaxation method. After that, the subject would be flooded with fears of the earthquake (example: a rumble, video, images, etc.). She was asked to face the fear and asked to use relaxation techniques learned. When first triggered with the video of

Yogyakarta earthquake in 2006, the subject wrote in the book logbook, she felt a bit hard to control it. At that moment, she suddenly was panicked, cried, and heart pounding. However, after the third trial began in the second meeting until the last trial at the closing session, she was able to control herself and remained calm until the end of rumble. Thus, the benefits to combine these methods were the fact that subject not only proficient in applying various relaxation techniques which were taught, but the subject also gradually became able to learn to apply relaxation in resembling fear situations.

Then, based on the findings and the explanation above, the coping strategy through active relaxation was quite successful in helping the subject to face her fears, as well as a forte and distinguishing the present study. However, this study is also not free from various drawbacks. Some weaknesses that should be corrected in future studies were to increase the number of subjects and include a control group. It was intended to have more convincing research findings. Despite having some deficiencies in the present study, the overall findings could still be assessed properly. Moreover, from the findings in this study, it could be concluded that the coping strategies through active relaxation could be one of effective method to reduce PTSD symptoms suffered by the victims of the earthquake and it is also possible to be used in PTSD with a variety of other causes.

SUMMARY

Based on the various objectives described in this intervention it could be concluded that the interventions of active coping strategies by using relaxation was able to fulfill the general and specific proposed objectives. Also, the quantitative data processing showed a decrease in PTSD symptoms were significant ($p = 0.002$, $p < 0.05$). In addition, there were 11 decreased indicators of mean values before and after the implementation of the intervention. While one had increased, there were five indicators that had a fixed value. These results were consistent with the qualitative data. Qualitative analysis found that subject was able to be more appropriate in finding ways of coping actively as a means of responding towards the PTSD symptoms and was able to keep herself calm (see Tab. 2). Given the findings in this study, it could be concluded that active coping strategies through relaxation could be one effective method to reduce PTSD symptoms experienced by victims of the earthquake and did not rule could also be used with other causes of PTSD.

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