

## The Effect of Acceptance and Commitment Therapy (ACT) on Post Traumatic Stress Disorder (PTSD) in Adolescents, Post-Flood

Kusno Ferianto<sup>1</sup> (corresponding author), Mei Widyawati<sup>2</sup>

<sup>1</sup>Department of Nursing, Sekolah Tinggi Ilmu Kesehatan Nahdlatul Ulama Tuban, Indonesia;  
kusno@stikesnu.com

<sup>2</sup>Department of Nursing, Sekolah Tinggi Ilmu Kesehatan Nahdlatul Ulama Tuban, Indonesia;  
widyawatimei92@gmail.com

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### ABSTRACT

Indonesia is a disaster-prone area, not only natural disasters but also non-natural disasters and social disasters. A disaster event will be a traumatic event for individuals who experience or witness it. One form of psychological impact that is often encountered in flood victims, especially teenagers, is Post Traumatic Stress Disorder (PTSD). PTSD in adolescents can be minimized by giving Acceptance and Commitment Therapy (ACT). This therapy is a behavioral therapy used to reduce avoidance behavior or escape from thoughts, emotions, and memories about traumatic events. The purpose of this study was to determine the effect of ACT on PTSD in post-flood adolescents in Kebomlati Village, Plumpang, Tuban. The research design was a one-group pre-post test design. The sample was selected by simple random sampling. From 150 teenagers, 30 teenagers were taken as respondents. Respondents were given ACT intervention for 6 days. Measurements were carried out using a PTSD screening questionnaire. The data that has been collected was then analyzed using the Wilcoxon test. The results showed that there was an effect of ACT on PTSD in adolescents with a p value of 0.000; so it is concluded that ACT can reduce PTSD.

**Keywords:** Acceptance and Commitment Therapy (ACT); Post Traumatic Stress Disorder (PTSD); flood; teenager

### INTRODUCTION

Indonesia is a disaster-prone area. Not only natural disasters, non-natural disasters and social disasters also often occur. A disaster event will be a traumatic event for individuals who experience or witness it. One of the most common disasters in 2016 was flooding<sup>(1)</sup>. Such conditions will cause psychological effects in the form of behavioral disorders, ranging from excessive anxiety, irritability, unable to sleep, tense and various other reactions. One form of psychological impact that is often encountered in flood victims, especially teenagers, is Post Traumatic Stress Disorder (PTSD). Research results have shown that children and adolescents who suffer from PTSD experience barriers to academic achievement, social interaction, reduced hope for the future and aggressive behavior<sup>(2)</sup>. This, if left untreated, can affect their ability to reach the developmental stage and fully function as adults<sup>(2)</sup>.

Basic Health Research of Indonesia in 2013 reported the prevalence of mental emotional disorders as indicated by symptoms of depression and anxiety for ages 15 years and over reaches around 14 million people or 6% of the total population of Indonesia<sup>(3)</sup>. While the number of cases of psychological disorders due to disasters based on research from The National Center for Post-Traumatic Stress Disorder states that 15-43% of adolescent girls and 14-43% of adolescent boys have experienced at least one traumatic event. In this group of adolescents it is estimated that between 3-15% of girls and 1-6% of boys meet the full criteria for PTSD<sup>(4)</sup>. A survey from the University of Indonesia funded by WHO on children in post-tsunami Aceh showed that as many as 20-25% of them had PTSD and needed help from experts. The results of other studies in the adolescent group the prevalence of PTSD reaches 8-9%, and the adolescent group at risk reaches 13-45%<sup>(4)</sup>.

Based on an initial survey conducted in Kebomelati Village, Plumpang, Tuban, 6 out of 10 teenagers said that when it often rains with heavy intensity and the Bengawan Solo river water discharge increases, they feel restless, fearful, remember the previous flood disaster and sometimes can't sleep. for fear of flooding. Meanwhile, 4 teenagers said when the same thing happened they felt calm and could sleep comfortably but sometimes felt a little anxious.

The factors that cause PTSD include biological, psychological, social and risk factors<sup>(2)</sup>. One of the main factors that influence the occurrence of PTSD in adolescents is psychological factors, not everyone who experiences a traumatic event such as a natural disaster will experience PTSD. This relates to the individual's coping abilities in solving problems. Usually individuals who experience PTSD will display maladaptive coping

as a reaction to the perceived stressor. Maladaptive behavior that arises is a sign of someone suffering from PTSD; so it is necessary to do proper treatment for PTSD so that this maladaptive behavior can return to being adaptive. Management of PTSD according to the National Institute of Mental Health <sup>(5)</sup> is psychotherapy and medication, or a combination of both. One of the effective therapies used to overcome the psychological factors that cause PTSD is Acceptance and Commitment Therapy (ACT). This therapy is a behavioral therapy (behavioral) that is used to reduce avoidance behavior or escape from thoughts, emotions, and memories of traumatic events. Clients are encouraged to accept unpleasant/bad experiences without trying to change them. This acceptance helps clients to learn to live by experiencing bad events and not focusing on reducing the stressor but rather on making the stressor a part of his life and of value. So that this can increase a person's willingness/acceptance to face thoughts, feelings and experiences that they have been avoiding. This avoidance behavior is then replaced by the behavior of accepting the traumatic event. Willingness/acceptance and openness are the keys in the Acceptance stage, where a person chooses an action according to his/her values and can make a commitment to change/improve behavior in accordance with the client's life goals <sup>(6)</sup>.

According to the Indonesian Institute for Counseling, Education and Therapy <sup>(6)</sup>, Acceptance and Commitment Therapy (ACT) is indeed indicated to overcome trauma due to disasters or PTSD. Acceptance and Commitment Therapy (ACT) is quite effective for PTSD sufferers, especially adolescents, but its effectiveness is better when combined with social support, which includes support from parents, teachers, siblings, peers, and the community. Social support becomes very valuable and important for adolescents when experiencing PTSD, because adolescents need trusted close people to help in overcoming PTSD disorders. This will make adolescents have good self-confidence, feel accepted, feel cared for, feel recognized, and can return to normal life <sup>(7)</sup>.

Based on the description above, researchers are interested in applying ACT to adolescents with PTSD after the flood in Kebomlati Village, Plumpang, Tuban.

### METHODS

This analytical study applies a “one-group pre-post test design” which reveals a causal relationship by involving a group of subjects. The population in this study were all adolescents in Kebomlati Village, Plumpang, Tuban, amounting to 150 people. The sample size was 30 teenagers who were selected by simple random sampling technique.

The independent variable in this study was ACT, while the dependent variable was PTSD in adolescents. The instrument used in this study was PTSD screening (PCL). This self-evaluation questionnaire consists of 17 questions consisting of 3 groups of questions. Questions 1-5 are included in the re-experiencing symptoms group, questions 6-12 are in the avoiding symptoms group, and questions 13-17 are in the hyperarousal symptoms group. The answer scores per item are: Always (SL) = 5, Often (SR) = 4, Sometimes (KD) = 3, Rarely (JR) = 2, Never (TP) = 1. Then the item scores are accumulated according to the number items with a total score of 85 and categorized into 3, namely: mild PTSD, if the respondent scores 17-39; moderate PTSD, if the respondent scores 40-62; and severe PTSD, if the respondent scores 63-85.

This research was conducted for 5 days with the implementation of ACT in 4 sessions. Sessions 1 to 4 are held in 4 meetings, and each meeting is held in approximately 60 minutes. If the youth successfully passed each session according to the criteria or objectives of each session, the youth could proceed to the next session. Each individual is evaluated at the end of the session.

The data collected was of categorical type so that it was presented in table of frequency and percentage <sup>(8)</sup>, After that, the PTSD difference was tested between before and after ACT administration using the Wilcoxon test.

### RESULTS

Table 1. PTSD scores in adolescents before the implementation of ACT

No.	PTSD	Frequency	Percentage
1.	Mild PTSD	12	40
2.	Moderate PTSD	18	60
3.	Severe PTSD	0	0

Table 2 shows that before intervention, most (60%) of the respondents experienced moderate PTSD.

Table 2. PTSD scores in adolescents after the implementation of ACT

No.	PTSD	Frequency	Percentage
1.	Mild PTSD	26	87
2.	Moderate PTSD	4	13
3.	Severe PTSD	0	0

Table 3 shows that after intervention, almost all (87%) respondents experienced mild PTSD.

Table 4. Effect of ACT on PTSD

ACT	PTSD			
	Mild PTSD	Moderate PTSD	Severe PTSD	Total
Pre	12 (40%)	18 (60%)	0 (0%)	30 (100%)
Post	26 (87%)	4 (13%)	0 (0%)	30 (100%)
Total	38 (127%)	22 (73%)	0 (0%)	60 (200%)

Table 4 shows that before the implementation of ACT, most of the adolescents experienced moderate PTSD, but after being given ACT, most of the adolescents experienced mild PTSD.

Based on the analysis using the Wilcoxon test, it is known that the p value is 0.000; so it was concluded that there was a difference in PTSD between before and after ACT administration.

### DISCUSSION

Prior to the ACT intervention, most of the youth at the Youth Posyandu in the village of Kebomlati Plumpang, Tuban had moderate PTSD. According to Parkinson (2000) in Tentama <sup>(7)</sup> PTSD is a traumatic event that occurs when a disaster occurs until the disaster has passed.

PTSD in adolescents is caused by traumatic events or stressors. There are several factors that play a role in increasing a person's risk of experiencing PTSD including biological, psychological, social and risk factors <sup>(9)</sup>. Inadequate social support from family and environment increases the risk of developing PTSD after a person experiences a traumatic event <sup>(5)</sup>.

The characteristics of adolescents experiencing PTSD in this study only included gender, age was not included as a characteristic because there was no age range for adolescents who were respondents in this study.

The sex of respondents who experienced moderate PTSD were male as much as 8 (80%) while female sex as much as 10 (50%). Ahmadi & Sholeh cit Astuti <sup>(4)</sup> state that psychological disorders are often found in adolescent girls due to an increase in emotional and hormonal maturity that is faster than male adolescents, male adolescents tend to be able to think logically and objectively in responding to something happened to him like a disaster.

The condition of adolescents in Kebomlati Village, Plumpang, Tuban is very different from the condition of adolescents in other villages, this is because the location of Kebomlati village is on the banks of the Solo River so it is prone to flooding every year when it enters the rainy season. Another thing experienced by the youth of Kebomlati Village when there was a flood they could not carry out their usual activities such as; cannot go to school, recite the Koran, play or help with parental work. From the flood events that have been experienced by the people of Kebomlati Village, especially teenagers, making some teenagers in Kebomlati Village experience symptoms of psychological disorders including being imagined by flood events, dreams about flood events, lack of interest in doing things they used to enjoy, difficulty sleeping at night, has difficulty concentrating, and worries easily. In addition to psychological factors, which affect PTSD in adolescents, namely social factors, lack of social support or attention from family and the environment/local health workers. Families as the closest people to teenagers with ordinary people don't know what is happening to their children, they consider these symptoms as a normal thing, while local health workers tend to pay attention to the physical impact rather than the psychological impact of the disaster. flood. This shows that most of the teenagers in Kebomlati village, Plumpang, Tuban have moderate PTSD.

After being given ACT, almost all teenagers experienced mild PTSD. This is reinforced by the theory that explains that PTSD can be overcome with ACT which aims to accept the situation that occurs, can be committed to having a path or direction in life according to the desired value.

In accordance with the theory of Orsillo and Batten (2005) in <sup>(6)</sup> there are two main processes that are focused on ACT therapy, namely developing acceptance of unwanted personal experiences (acceptance) and committing to take actions that are in accordance with the client's life goals (commitments).

This decrease occurred due to the participation of respondents in ACT activities which showed an increase in abilities and changes in behavior which were assessed in the observation sheet for each meeting session individually. The meeting of the first session and the second session the average ability of teenagers was quite good, so they were able to continue to the next session, but in the first session point 5 (delivering behavior due to thoughts and feelings that arise as a result of bad/unpleasant events) needs to be improved because in these points are not carried out by respondents. At the third session meeting, it showed the highest average improvement such as being able to prioritize the selected behavior, being able to practice good behavior again. And in the fourth session, on average, most teenagers were able to mention the plans that would be made to avoid the recurrence of bad behavior and were able to mention the plans that would be made to maintain good behavior. And the point that needs to be improved in this fourth session is being able to mention ways to improve the ability to behave well.

Even though there was 1 teenager who was sick at the fifth evaluation meeting, the activity could still take place. Other teenagers continue to participate in activities and the acquisition of observation scores shows an increase in the highest average ability such as teenagers being able to prioritize behaviors that will be trained and corrected, able to re-practice good behavior according to what the therapist teaches, able to practice behaving according to what is taught by including schedule daily activities, able to mention plans that will be carried out to maintain good behavior, able to receive instructions and remember instructions that have been given at the previous meeting well. At the fifth meeting, the average adolescent showed a lot of improvement such as acceptance of unwanted thoughts and feelings, commitment and behavior in his life based on the values chosen by the client himself.

The decrease in PTSD in adolescents in Kebomlati Village, Plumpang Tuban is because respondents always carry out what is instructed and are able to work well with therapists. In this case, the benefits of therapy goals can be proven, which was that before being given therapy, teenagers were difficult to concentrate, easily worried, lacked interest in doing things that they used to enjoy after being given therapy. things you used to enjoy. From the changes in the attitude of the teenagers after being given ACT, it showed that there was a moderate to mild decrease in PTSD. However, 4 (13%) teenagers out of 30 still experience moderate PTSD after being given ACT due to several things, such as how to capture or receive information from each respondent is different and personal problems with family at home.

The results of hypothesis testing indicate that there is an effect of applying ACT to PTSD in adolescents, after the flood in Kebomlati Village, Plumpang Tuban. PTSD in adolescents decreased after being given ACT. This is reinforced by the theory that basically PTSD in adolescents has several treatments, namely pharmacotherapy and psychotherapy. ACT is a psychotherapy that is used in various situations with psychological disorders. ACT has two main goals, namely: 1) Teaching acceptance of unwanted thoughts and feelings that cannot be controlled by the client, helping clients achieve and live a more meaningful life without having to eliminate unpleasant thoughts that occur. 2) Train clients to commit and behave in life based on the values chosen by the clients themselves.

In ACT therapy, a client is not allowed to reduce, modify, avoid, suppress, or control traumatic personal experiences. The client learns to stop battling with these experiences, giving space and allowing them to come and go in thoughts and feelings without any effort to suppress or avoid them. Clients are encouraged to identify values or life goals and act consistent with those values. The essence of this technique is acceptance and commitment. Avoiding or running away from negative thoughts and feelings will exacerbate a person's psychological suffering. Accepting the symptoms resulting from traumatic events and reorganizing life goals will improve the quality of life of the sufferer by using six techniques in ACT therapy, namely cognitive diffusion, acceptance, contact with the current situation, self-observation, values and commitment. to act.

The results of this study support previous research such as the research conducted by Erwina <sup>(5)</sup> about PTSD in the post-earthquake population using Cognitive Behavior Therapy (CBT). The study showed that CBT had a significant effect on changes in the level or condition of PTSD in the post-earthquake population. This therapy is based on the principle that thoughts affect mood. Through this therapy individuals are taught to control their thoughts by really considering the factors in the development and persistence of mood disorders.

This research is similar to giving ACT to PTSD in adolescents, after the flood in Kebomlati Village, Plumpang Tuban. Based on the data obtained, it shows a decrease in PTSD from moderate to mild. From the results of research and theory, ACT is very effectively carried out at the youth posyandu in Kebomlati Plumpang Tuban to develop acceptance of unwanted personal experiences (acceptance) and commit to take actions that are in accordance with the client's life goals (commitment).

### **CONCLUSION**

Based on the results of the study, it was concluded that ACT was effective in reducing PTSD in adolescents due to the flood disaster in Kebomlati Village, Plumpang, Tuban, Indonesia.

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