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Cognitive therapy and supportive therapy to reduce anxiety, psychological preparedness, and anticipation of tornado disasters

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Abstract-- Disasters in Indonesia are hydrometeorological disasters, that is, 95% of disasters are affected by the weather. Disasters that continue to increase are tornadoes. The nursing action given is generalist anxiety action followed by mental nursing specialist therapy with cognitive therapy and supportive therapy. The method used was a quasi-experimental type of pre and post-test one-group design with a case series approach. The instrument used by HARS to measure anxiety and PPDS to measure psychological preparedness. The results obtained are a change in anxiety, which initially was 20 people with moderate anxiety to 16 people with mild anxiety and 4 people who did not experience anxiety, psychological preparedness from the first 11 in the high category to a total of 20 people in the high category with increased scores and the ability to increase 100%. The

conclusion is on Initially, 20 people were anxious, 16 people were mildly anxious and 4 people did not experience anxiety, psychological preparedness was from 11 in the high category to a total of 20 people in the high category with an increase in the score and the ability to increase 100%. The conclusion is anxiety psychological preparedness and ability before and after generalist nursing action, cognitive therapy, and supportive therapy, there is a decrease in signs of symptoms and an increase in the ability to anticipate tornado disasters. Recommendations to further increase the number of samples and the number of frequent meetings of at least 4 times according to the number of sessions in each therapy and to supervise in independent exercise.

Keywords---tornado, adulthood, generalist nursing actions, cognitive therapy, and supportive therapy.

Introduction

Natural conditions that are prone to disasters and human behavior that exists in Indonesia by destroying nature, increasing forest damage, environmental damage, and low awareness of disaster culture make Indonesia ranked fifth out of 10 countries based on disaster events according to the Center for Research on the Epidemiology of Disaster after China, USA, India, and the Philippines (Debarati Guha-Sapir, Philippe Hoyois & Below Regina, 2016).

Some of the disasters that continue to increase are hurricanes. In 2018 there were 605 tornadoes recorded more than other natural disasters. At the beginning of 2019 tornadoes were the most common disaster with 241 incidents (Badan Nasional Penanggulangan Bencana, 2019).

According to (Sandhu & Kaur, 2013), each type of disaster, especially natural disasters, has its psychological impact on the victims, especially adults (World Health Organization & International Council of Nurses, 2009). Even according to (Bakhshian et al., 2013) explaining the results of the study, it was found that 30.5% of respondents experienced anxiety and as many as 21.45% of these respondents showed symptoms of cognitive distortion in the form of negative thoughts that arise due to anxiety. Anxiety nursing actions can be given by combining several types of therapy including generalist nursing actions and specialist nurses with individual, family, and group approaches. Nursing generalist actions by practicing deep breathing, distraction, spiritual activities, and five-finger hypnosis (Keliat, 2011). The psychiatric nursing specialist therapy includes cognitive therapy (Wahyuning et al., 2011) and supportive therapy. The purpose of this study was to determine the effect of generalist nursing, cognitive therapy, and supportive therapy on anxiety, psychological preparedness, and individual ability to anticipate disasters. The hypothesis in this study is that there is an effect of generalist nursing, cognitive therapy, and supportive therapy on anxiety, psychological preparedness, and individual ability to anticipate disasters.

Method

This study used a quasi-experimental type of experimental pre-test and post-test one-group design approach in the form of a case series with a pre-post-test technique. The population was the community that saw the tornado and was not directly affected. Samples were taken from as many as 20 people using the purposive sampling technique. The inclusion criteria were adult age (18-65 years), not directly affected by the disaster, and able to read and write. The independent variables in this study were cognitive therapy and supportive therapy, while the dependent variables were anxiety, psychological preparedness, and disaster anticipation. The instrument was HARS to measure anxiety, Psychological Preparedness for Disaster Threat Scale (PPDTS) to measure psychological preparedness and individual abilities with cognitive therapy evaluation books and supportive therapy. According to HARS score <14: no anxiety, score 14-20: mild anxiety, and score 21-27: moderate anxiety. The score according to PPDTS, the score of this questionnaire ranges from 26-to 104, by looking for the mean value to determine the low or high category. If the score is above the mean, it is called a high category. While the ability of Nursing Action Nurses (TKN) are deep breathing, 5 finger technique, diversion, and spirituality. Cognitive therapy abilities are automatic thinking, rational responses, support systems, and therapeutic benefits. While the ability of supportive therapy, namely mentioning unpleasant experiences, using the support within the family and support outside the family

The method of data collection was by asking local cadres, residents who saw the tornado disaster, then recorded and visited and first measured the level of anxiety. Residents whose anxiety measurement results experience anxiety are being explained the research to be carried out by being divided into two groups, each group consisting of 10 respondents. A week later, measurements were taken again while being given cognitive therapy with 2 meetings. After a week, supportive therapy was carried out with 2 meetings, and measurements were taken again. so that it can be seen changes in anxiety, psychological preparedness, and individual abilities before and after specialist nursing actions are carried out. The statistical test used is to calculate the frequency distribution and its percentage. Processing is done manually using excel by entering initial pre-post data, then pre-post after generalist actions, generalist actions and cognitive therapy and generalist nursing actions, cognitive therapy and supportive therapy related to anxiety, psychological preparedness, and disaster anticipation abilities, then analyzing the changes after the action, which one is more influential.

Results

Table 1
Respondents' characteristics (n=20)

No.	Respondents' characteristics	Frequency	Percentage
1.	Education		
	a. Elementary	5	25

	school	10	50
	b. Middle school	5	25
	c. Senior High School		
2.	Job status		
	a. Not working	17	85
	b. Working	3	15

In table 1. Most of the respondents were middle school graduates and not working.

Table 2
Changes in anxiety, psychological preparedness, and ability before and after general nursing intervention (n=20)

No	Variables	Before intervention	Percentage	After intervention	Percentage
1	Anxiety				
	a. No anxiety	0	0	0	0
	b. Mild	0	0	5	25
	c. Moderate	20	100	15	75
2	Preparedness				
	a. Low	9	45	0	0
	b. High	11	55	20	100
3	Nursing Intervention				
	a. Deep breath	15	75	20	100
	b. 5 fingers hypnosis	10	50	20	100
	c. Distraction	20	100	20	100
	d. Spiritual	20	100	20	100

Changes in anxiety after general nursing interventions were initially all moderate anxiety became mild anxiety, while the initial high and low preparedness became all high, while the ability which was initially not 100% after generalist therapy became 100% entirely.

Table 3
Changes in anxiety, psychological preparedness, and abilities before and after general nursing interventions and cognitive therapy (n=20)

No	Variables	Before general nursing interventions and cognitive therapy	Percentage	After general nursing interventions and cognitive therapy	Percentage
1	Anxiety				
	a. No anxiety	0	0	0	0
	b. Mild	5	25	13	65
	c. Moderate	15	75	7	35
2	Preparedness				
	a. Low	0	0	0	0
	b. High	20	100	20	100

3	CT ability				
	a. Negative thinking	20	100	20	100
	b. Responsive	20	100	20	100
	c. Support resources	20	100	20	100
	d. Benefits				

Changes in anxiety after generalist measures and cognitive therapy were initially mild and moderate anxiety became more mild anxiety, while there was no change in preparedness and ability because initially, they were all high.

Table 4
Changes in anxiety, psychological preparedness, and ability before and after generalist actions, cognitive therapy, and supportive therapy (n=20)

No	Variables	Before general nursing interventions, cognitive therapy, and supportive therapy	Percentage	After general nursing interventions, cognitive therapy, and supportive therapy	Percentage
1	Anxiety				
	a. No anxiety	0	0	4	20
	b. Mild	13	65	16	80
	c. Moderate	7	35	0	0
2	Preparedness				
	d. Low	0	0	0	0
	a. High	20	100	20	100
3	ST ability				
	a. Not satisfactory	20	100	20	100
	b. Family support	20	100	20	100
	c. Outside of the family	20	100	20	100
	a. Evaluation				

Changes in anxiety after generalist measures, cognitive therapy, and supportive therapy were initially mostly mild anxiety to those who were not anxious, while there was no change in preparedness and ability because initially, they were all high.

Discussion

Characteristics of respondents

Respondents in this final scientific paper do not work (85%). Psychological trauma after a natural disaster will further exacerbate psychological conditions or problems that existed before the disaster occurred (Sherchan et al., 2017). The client's education level is SMP (43%) and SD 34%. This is supported by

Leuckenotte (Stuart, 2016) who said that education is a measure of a person's ability to interact effectively. The results of the study show that a high level of education is closely related to cognitive abilities and the coping mechanisms used, so the possibility of a person being at risk of experiencing stress is much lower than individuals who have a low level of education (Carlson et al., 2016).

The respondent's age level is adult age because adult age is one of the vulnerable ages in dealing with disasters. According to (Sandhu & Kaur, 2013), each type of disaster, especially natural disasters, has its psychological impact on the victims, especially for groups that are vulnerable to disaster events, one of which is adults (World Health Organization & International Council of Nurses, 2009). Other studies on the impact of disasters have also been studied (E et al., 2017) the results of this study show that adults have a high level of stress compared to adolescents and children. But on the other hand, adults have the potential to manage their anxiety, so that by being prepared with the knowledge and psychological abilities, they will be better prepared to face disasters.

All respondents are female. Research conducted (Hall, 2014) shows that women are more at risk of experiencing stress and anxiety when experiencing a traumatic event when compared to men. During carrying out activities, especially those related to group activities, it is almost rare for men to participate, generally, women who come are women. However, this is by the activities of this scientific work, because what will be measured is related to experiences in the form of traumatic events in disasters.

All respondents in this scientific work are married. The results of the research conducted (Wang et al., 2010) revealed that of the 353 earthquake victims in China, 55.5% of victims who were not married and divorced had a greater potential to experience trauma.

Effects of generalist nursing actions

Anxiety before generalist action all experienced moderate anxiety, namely 20 people (100%), and after generalist therapy, 15 people (75%). There was a decrease from moderate anxiety to mild anxiety in 5 people. Meanwhile, the psychological readiness before generalist therapy was mostly in the high category as many as 11 people (55%) with a score between 43-46, after being given generalist action it became entirely in the high category as many as 20 people (100%) with a score between 48-56. There was an increase in 9 people from low psychological preparedness to high psychological preparedness with the addition of scores. While the generalist abilities were entirely possible before generalist therapy was carried out, namely by diversion and spiritual only as many as 20 people (100%), after generalist therapy all generalist abilities consisting of deep breathing, five-finger techniques, diversion, and spirituality all became 100%. So there is an increase in the generalist's ability to take deep breaths from 15 people to a total of 20 people and the generalist's ability of the 5 finger technique from 10 people to 20 people.

According to (Videbeck, 2018) the prevalence of anxiety in developing countries is 50% in adults. This further reminds us that disasters can cause psychosocial

symptoms. Generalist nursing therapy is by practicing deep breathing, distraction, spiritual activities, and five-finger hypnosis. (Keliat, 2011).

Effect of generalist nursing actions and cognitive therapy

Anxiety before generalist action and cognitive therapy experienced moderate anxiety were 15 people (75%), after generalist therapy and cognitive therapy had moderate anxiety, only 7 people (35%), experienced mild anxiety as many as 13 people (65%). There was a decrease from moderate anxiety to mild anxiety in as many as 8 people and from 5 who experienced mild anxiety to 13 people, there was an increase of 8 people. Meanwhile, the psychological readiness before generalist therapy and cognitive therapy was carried out entirely in the high category as many as 20 people (100%) with a score of 48-56, after being given generalist measures and cognitive therapy remaining entirely in the high category as many as 20 people (100%) but experienced an increase in score. to be 55-60. While the generalist ability and ability to perform cognitive therapy, previously only generalist ability was 100% after generalist therapy and cognitive therapy were carried out, there was an increase of 100% in terms of expressing automatic thoughts, expressing rational responses, using support systems, and revealing the benefits of exercise.

The tornado disaster had passed about four months ago, but every day there are still strong winds but they do not cause significant damage. Distress associated with natural disasters will last long after the incident (Ando et al., 2017). According to, (Clarke & Chess, 2017) the fear and panic experienced by a person when in a disaster situation will gradually decrease and the client's perception begins to increase again. The key is that clients with anxiety must be able to identify negative thoughts and fight them to be rational (Kazantzis, 2010). The study of these therapies related to disasters resulted in a significant difference in the reduction of ASD symptoms and an increase in the ability to change negative thoughts in the group receiving generalist therapy and cognitive therapy compared to the group receiving only generalist therapy (Muliantika et al., 2018).

Effect of generalist nursing actions, cognitive and supportive therapy

There were 7 people (35%) who experienced mild anxiety and 13 people (65%). After generalist therapy, cognitive therapy, and supportive therapy were performed, no more experienced moderate anxiety, 16 people became mildly anxious (80%) and 4 people became less anxious (20%). While the psychological readiness before generalist therapy, cognitive therapy, and supportive therapy were all in the high category as many as 20 people (100%) with a score between 55-60 and after being given generalist measures, cognitive therapy, and supportive therapy remained entirely in the high category as many as 20 people (100%) but has increased the score to 59-65. Meanwhile, previously only the generalist ability and the ability to perform cognitive therapy were 100%, except in keeping a daily record of 80% after generalist therapy, cognitive therapy and supportive therapy had an additional 100% of total abilities plus in terms of identifying unpleasant experiences, being able to use the system support in the family as well as being able to use a support system outside the family.

According to (Keliat, 2007) specialists, nursing actions on anxiety can be individual therapy, namely cognitive therapy and group therapy with supportive therapy. In the implementation of group therapy, each individual provides mutual support for each other. This group therapy also gives members the ability to provide support and understand the problems they are experiencing (Chien et al., 2008) through personal guidance and social or group guidance, it is hoped that it can increase psychological preparedness to face disasters which will reduce the risk of natural disasters (Watts, 2007). Other studies who revealed the benefits of giving therapy in groups was done by (Olsen, 2013) based on the results of the study it was found that there was an increase in the ability to change negative thoughts in disaster victims after being given group-based nursing therapy.

This is to the opinion (Olsen, 2013) that by using group-based nursing therapy, the respondents learn a new ability, learn new coping mechanisms from fellow group members. The skills that have been learned can be used by disaster victims to fight the negative thoughts they have. This statement is reinforced by statements submitted by (Stuart, 2016) and (Varcariolis, 2013) with group activities, fellow members will be able to discuss with each other, so that motivation among fellow group members can be formed and help direct their cognitive and behavior toward a better direction.

According to (Gunawan, 2008), preparedness in dealing with natural disasters is obtained from experience. Therefore, with good knowledge and experience, a good and appropriate attitude is formed in dealing with disasters. The experience of the residents of RW 8 is that they have seen the incident first-hand, but did not feel the impact of the disaster so the preparation for facing the disaster was not optimal and the feelings felt were not as heavy as those those who experienced the direct impact of the disaster.

The results of this case report show a change in anxiety, an increase in psychological preparedness, and the ability to anticipate disasters after being given generalist measures, cognitive therapy, and supportive therapy. These results recommend the need for further research to see the effectiveness of therapy on anxiety, psychological preparedness, and the ability to anticipate disasters with larger sample size and increase the number of sessions.

Conclusion

The characteristics of clients who experience anxiety were all female, junior high school education level, not working and all of them are married. Anxiety, psychological preparedness, and ability before and after generalist nursing actions have decreased in signs or symptoms and there is an increase in anticipation of hurricane disasters. Anxiety, psychological preparedness, and ability before and after generalist nursing actions and cognitive therapy showed a greater decrease in signs and symptoms compared to generalist actions and supportive therapy Anxiety psychological preparedness and abilities before and after generalist nursing actions, cognitive therapy and supportive therapy there was a decrease signs and symptoms and increased ability to anticipate hurricane disasters.

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