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The effect of cognitive therapy and school-age therapeutic group therapy on children's anxiety and post-disaster psychological preparedness

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Abstract---Background: Natural disaster is an unpredictable event. Children are the most affected psychologically on the post disaster state. The shortage of psychological preparedness and the lack of capability of children cause the emotional effect which lead to anxiety and emerging negative thoughts. The appropriate therapy given on overcoming such problems are cognitive therapy and school-age therapeutic group therapy. Methods: The research approach used in this study was case series conducted on 8 respondents consist of school-age children by pre-post test measurement of anxiety, psychological preparedness and the client capability. Results: The analysis result showed the changes in anxiety scale, disaster psychological preparedness and the improvement of children's capability after they were given the nursing intervention, cognitive therapy and school age therapeutic group therapy. Conclusion : The application of cognitive therapy and school age therapeutic group therapy able to decrease the anxiety scale, disaster psychological preparedness and increased of children's capability.

Keywords---tornado disaster, anxiety, psychological preparedness, cognitive therapy, school age therapeutic group therapy.

Introduction

Almost all countries in the world have experienced disasters, one of which is natural disasters. Data from the Center for Research on the Epidemiology of Disaster (2016), shows that throughout 2015, there have been 376 natural disasters in the world. Indonesia itself is one of the countries included in the list of countries that have the potential to experience disasters, such as volcanic eruptions, earthquakes, tsunamis, floods and landslides. BNPB data shows that the most disasters that occurred in Indonesia during 2018 were tornadoes which reached 750, followed by 627 floods, 440 landslides, 20 earthquakes, one tsunami, excluding the tsunami that hit Banten and Lampung (CNNI, 2018). The National Disaster Management Agency (BNPB) revealed that 21% of disasters that occurred in Indonesia were caused by hurricanes (Darman, 2019). Related research illustrates that tornado victims are more severely affected than those caused by other disasters (Evans, 2002). A case study conducted by Dollinger (1992, and Evans, 2002) found that victims of tornadoes were more emotionally affected than victims of other types of natural disasters, especially children who were more worried about death caused by hurricanes. Children who are participants in the study, are said to have a tendency to easily recall tornado events that they saw for themselves.

Anxiety in children is generally caused by the difficulty of expressing what they think and feel, as well as the fear of living alone apart from their family, and feelings of insecurity and discomfort with environmental changes (Keliat & Marlina, 2018). This is supported by the previous study by Nuari (2015) where it is said that children's anxiety responses to natural disasters that occur are often shown by children's anxiety and concern when they cannot go to school and live in refugee camps, so they lose time to play. This manifestation of anxiety and the insecurity in the long term can disrupt the process of psychological development of children (Mashar, 2011). Regarding the psychological development the developmental task that must be fulfilled is to learn independently and be able to complete everything completely. Prolonged anxiety can also affect the psychological development process of children. Disturbed psychological development can affect a child's ability to solve problems and socialize in the next phase of growth and development (Istiana, 2012). Counseling is one of the efforts used to overcome anxiety in post-disaster children through a group play therapy approach, which is used to examine deeper the feelings, thoughts, behavior, and experiences of children against natural disaster events experienced, where the results are effective in alleviating children's fears and anxiety. However, it has not been described how the thoughts and feelings that arise in the children victims of the natural disaster (Nawangsih, 2014). Therefore we need a psychiatric nursing specialist therapy that can help children in overcoming the problem. The appropriate psychiatric nursing specialist therapy to identify the thoughts that arise in the children is cognitive therapy. This is in line with the results of Hidayati's research (2018) where the results show that cognitive therapy exercises can improve cognitive abilities in controlling thoughts and the ability to control negative thoughts. In addition to individual therapy, therapy for child's support system is also needed, one of which is school-age therapeutic group therapy (TKT). Jordan and Litz (2014) describe regarding group therapy, is the therapy given in groups provides opportunities for children to share experiences regarding

the coping mechanisms used by each client, in dealing with difficult situations, one of which is a tornado.

Method

The approach used in carrying out the research in this report is in the form of a case series with a pre-posttest technique on school-aged children aged 9-12 years who experience anxiety and lack of psychological preparedness after a disaster with an anxiety measuring instrument in the form of the Hamilton Anxiety Rating Scale (HARS) and psychological preparedness measuring tool in the form of Psychological Preparedness for Disaster Threat Scale (PPDTS). The intervention carried out in this study was the nursing care combined with psychiatric nursing specialist therapy, namely Cognitive Therapy and School Age Therapeutic Group Therapy (TKT) on all managed clients without a control group. The population in this study are school children who live in RW 10, Pamoyanan Village, with the inclusion criteria as follows:

- a. Children is the resident of RW 10 Pamoyanan Village and was directly affected by the hurricane disaster
- b. Age 9-12 years (Source: Wetik, 2017)
- c. Experiencing anxiety based on the measurement of the Hamilton Anxiety Rating Scale (HARS) instrument with a score range of 14-56.

Based on the inclusion criteria and the results of the HARS measurement, it was found that 8 children aged 9-12 years experienced post-disaster anxiety, so that all 8 people were used as samples.

Discussion

Characteristics of Respondents

Table 1 Distribution of Respondents Frequency by Gender of Post-Disaster School Children in RW 10, Pamoyanan Sub-district (n= 8)

No.	Characteristics	Frequency (f)	Percentage (%)
1.	Gender:		
	Male	2	25
	Female	6	75

Based on table 1, it is known that most participants were 6 women (75%) and 2 men (25%). This is in line with the results of Hadibroto's research (2010, in Hastuti, 2016), where it is said that women have higher levels of anxiety than men. Fatimah's research (2010) on gender in disaster risk reduction reveals that gender is a part of socio-culture that affects self-preparedness, anticipation, self-defense, and the disaster recovery process.

Changes in Anxiety, Psychological Preparedness, and Ability of Post-Disaster School Children Before and After Giving Generalist Nursing Intervention, Cognitive Therapy, and School Age Therapeutic Group Therapy

Table 2 Changes in Anxiety, Psychological Preparedness, and Ability of Post-Disaster School Children Before and After Giving Generalist Nursing Intervention, Cognitive Therapy, and School Age Therapeutic Group Therapy.

No.	Variable	Generalist Nursing Intervention				Generalist Nursing Intervention +Cognitive Therapy				Generalist Nursing Intervention +Cognitive Therapy + School Age Therapeutic Group Therapy			
		Pre		Post		Pre		Post		Pre		Post	
		Qu	%	Qu	%	Qu	%	Qu	%	Qu	%	Qu	%
1.	Anxiety												
	Not present	0	0	0	0	0	0	1	12.5	1	12.5	4	50
	Mild	0	0	2	25	2	25	3	37.5	3	37.5	4	50
	Moderate	2	25	0	0	0	0	1	12.5	1	12.5	0	0
	Severe	4	50	5	62.5	5	62.5	3	37.5	3	37.5	0	0
	Very severe	2	25	1	12.5	1	12.5	0	0	0	0	0	0
2.	Psychological Preparedness												
	Low	7	87.5	4	50	4	50	3	37.5	3	37.5	0	0
	High	1	12.5	3	37.5	3	37.5	5	62.5	5	62.5	8	8
3.	Generalist Nursing Intervention												
	Take a deep breath	0	0	8	100	8	100	8	100	8	100	8	100
	5 finger hypnosis	0	0	8	100	8	100	8	100	8	100	8	100
	Distraction technique	5	62.5	8	100	8	100	8	100	8	100	8	100
	Spiritual	8	100	8	100	8	100	8	100	8	100	8	100
4.	Cognitive Therapy Ability												
	Identify unpleasant experiences and negative thoughts			8	100	8	100	8	100	8	100	8	100
	Fighting negative thoughts			8	100	8	100	8	100	8	100	8	100
	Take advantage of the support system			8	100	8	100	8	100	8	100	8	100
	Benefit evaluation			8	100	8	100	8	100	8	100	8	100
5	School Age Therapeutic Group Therapy Capability												
	Searching for information									4	50	8	100
	Identify the problem									3	37.5	8	100
	Have a healthy body									8	100	8	100
	Have a sense of competition									8	100	8	100
	Reading, writing and arithmetic									8	100	8	100
	Controlling emotions									0	0	8	100
	Knowing cause-and-effect relationships									5	62.5	8	100
	Cooperate									8	100	8	100

Table 2 shows the anxiety experienced by the client before the Generalist Nursing Intervention, Cognitive Therapy, and School Age Therapeutic Group Therapy were identified who experienced very severe anxiety, severe anxiety as many as 3 people (37.5%), moderate anxiety as many as 1 person (12.5%), mild anxiety as many as 3 people (37.5%), and not experiencing anxiety as much as 1 person (12.5%). After being given Generalist Nursing Intervention, Cognitive Therapy, and School Age Therapeutic Group Therapy there was a change in the anxiety experienced by the client being managed. Table 3.6 shows that those who experience severe anxiety, severe anxiety, and moderate anxiety are no longer identified, mild anxiety is 4 people (25%), and no anxiety increases to 4 people (50%). So it can be said that anxiety in managed clients experienced optimal changes after being given Generalist Nursing Intervention, Cognitive Therapy, and School Age Therapeutic Group Therapy as evidenced by an increase in the number of clients in the non-anxious category by 50% compared to the previous

Psychiatric Specialist Nursing Intervention and cognitive therapy. Regarding the client's psychological preparedness, based on table 3.3 it can be interpreted that before being given Generalist Nursing Intervention, Cognitive Therapy, and School Age Therapeutic Group Therapy as many as 3 clients (37.5%) had low psychological preparedness, and 5 people (62.5%) had high psychological preparedness. After being given Generalist Nursing Intervention, Cognitive Therapy, and School Age Therapeutic Group Therapy there was an increase in psychological preparedness in managed clients, where all managed clients as many as 8 people (100%) had high psychological preparedness. So it can be concluded that the combination of psychiatric specialist nursing intervention, cognitive therapy, and school-age TKT is effective in increasing psychological preparedness in clients managed by school children. 5% of the previous result. Not only anxiety and psychological preparedness, but the ability of the client also changes.

Influence of generalist nursing intervention

The results obtained indicate that after being given nursing intervention by the generalist nurses on 8 managed clients, there was a decrease in the level of anxiety in the managed clients. The results of Livana, Keliat, and Putri (2016) research on reducing anxiety levels, which illustrate that after being given generalist actions in the form of deep breathing relaxation, distraction techniques, spirituality, and five-finger hypnosis are able to reduce anxiety levels as indicated by a decrease in cognitive, affective, and emotional responses, physiological, behavioral, and social. Other studies, such as Jordan and Litz (2014), Muliatika (2018), describe the effect of providing nursing actions for nurses on victims of natural disasters, where the results of these studies indicate that there is a change in acute stress conditions experienced by victims of natural disasters which is characterized by a decrease in the number of signs and symptoms that appear. In addition, based on the results of the research, it was found that after receiving generalist nursing intervention, clients who had high psychological preparedness increased to 37.5% from before. Awakening techniques in children who experience anxiety, can create a happy atmosphere and a better condition. A happy atmosphere and better conditions for children can be said to make children more prepared to deal with the stressors they get (George & Sam, 2017). The ability of nurses is also felt to increase in managed clients, where there is an increase in the ability to control anxiety with deep breathing, five finger hypnosis, distraction techniques, and spiritual. The same thing was also investigated by Putri and Rachmatan (2005) on clients who were victims of the Aceh Tsunami, where respondents who perceive the disaster events using religious values showed a decrease in emotional reactions and stress felt through a spiritual approach, there was a change in the client's level of anxiety. It was said in the study that disaster victims viewed the incident as an acceptance of the life that had to be lived, so that with this acceptance they were able to change the anxious response that appeared earlier. This is supported by the study by Nuari (2015), where it is said that the indicators of education, culture, and spirituality have a significant effect on the ability of children to deal with the problems they receive.

Influence of generalist nursing intervention, Cognitive Therapy and School Age Therapeutic Group Therapy

The results of the analysis conducted on managed clients who experienced anxiety after receiving generalist nursing intervention, cognitive therapy, and therapeutic group therapy showed a change in anxiety levels of 50% from before. This shows a significant decrease where half of the number of clients managed, namely 4 people (50%) no longer experienced anxiety after being given generalist nursing intervention, cognitive therapy, and school-age therapeutic group therapy. Giving group therapy provides opportunities for children to share experiences regarding the coping mechanisms used by each client and use the new group as a support system (Jordan & Litz, 2014). In line with research conducted by Wetik, Yossie, and Mustikasari (2016), the provision of therapeutic group therapy (TKT) to school children can improve the development of 8 aspects of development in school children and the child's ability to achieve the stages of development tasks more optimally. Optimal development in children is needed in helping children to be better prepared to adapt to changes that occur or difficult situations they face. In addition to anxiety, the client's psychological preparedness after being given generalist nursing intervention, cognitive therapy, and school-age therapeutic group therapy has changed to 100% from before. The level of psychological preparedness in clients with a high category experienced a difference of 37.5% change after being added to the school age therapeutic group therapy.

This is in line with what was stated by Bruner and Lewis (2006, in Haryuni, 2018) where the cognitive development of children who are trained during therapeutic group therapy greatly affects the preparedness of children, because children will be able to think initiatively and carry out the skills taught so that children are able to anticipate and be able to control themselves against actions that should be taken to be prepared in the event of a disaster and increase awareness of others in dealing with disasters. This is in line with Cleodora's research (2016) regarding school-age therapeutic group therapy, where the results show that therapeutic group therapy can help school children to control feelings of anxiety and solve problems felt due to disasters. In addition, through therapeutic group therapy can form school children's self-efficacy,

Conclusion

The results of this case series indicate a decrease in anxiety, and an increase in post-disaster psychological preparedness, as well as the ability of school children before being given nursing care, cognitive therapy, and school-age therapeutic group therapy. The government needs special attention to the handling of post-disaster psychological impacts on school-age children, by involving the Puskesmas and the community including school children, families, teachers, and mental health cadres as well as mental specialist nurses or CMHN nurses so that they can provide appropriate treatment to overcome anxiety and depression, improve the psychological preparedness and the ability of post-disaster school children.

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