

Original Research Paper

# Thought Stopping Therapy to Anxiety Level on COVID-19 Pandemic ERA

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**Abstract:** COVID-19 has become a worldwide health pandemic due to the increasing death rate. This causes a variety of responses, one of which looks like anxiety. Thought Stopping becomes one of the therapies that can be done in lowering anxiety. This study aimed to look at the effect of thought-stopping therapy on anxiety levels in the COVID-19 pandemic era. The research design used was a quasi-experiment intervention and the control group used the valid questionnaire, COVID-19 Peritraumatic Distress Index questionnaire to pre-test and post-test. The population in this study was people who experienced anxiety caused by COVID-19 in Pekanbaru city with a total of 32 control groups and 32 interventions with inclusion criteria sample: (1) Located in Pekanbaru area; (2) Willing to be a respondent; (3) not in panic attacks; (4) Not taking anti-depressant and anxiety drugs. As the result of this study, there was a difference in anxiety levels between the intervention and control groups ( $p$  value = 0.000). The conclusion, Thought Stopping could be used as one method in lowering anxiety during the COVID-19 pandemic.

**Keywords:** COVID-19, Thought Stopping Therapy, Anxiety

## Introduction

Coronavirus Disease 2019 (COVID-19) has become a worldwide health pandemic. Wordometer (2020) recorded until May 2020 worldwide, there were 11.197.174 positive cases where 529.197 died and 6.342.850 recovered. Meanwhile, in Indonesia there were 60.695 positive cases, 3.036 died and 27.568 recovered (COVID-19, 2019). BSR (2020) recorded lowering people's until the beginning of June 2020 obtained 220 positive people, 89 people are still being treated, 121 people are healthy and 10 people died in Riau. Based on the data, the Governor stated Riau is a red zone pandemic area. Meanwhile, Pekanbaru which is a city that is a cross between regions, both within the province and outside the province, recorded 88 positive people where 76 people were recovered, 6 were treated and 6 others died.

COVID-19 makes the world apply to keep people at home and limit outdoor activities. The COVID-19 incident in an instant managed to change people's lifestyle and social relations (Casagrande *et al.*, 2020). Not only from social relations, but COVID-19 also impacts health, economy, industry, physical health and mental health (Hagerty and Williams, 2020). The absence of proper

prognosis, effective treatment and treatment, transmission and unclear information causes people to become agitated, anxious and even make them respond excessively (Pfefferbaum and North, 2020). Concerns caused by COVID-19 can be a problem with a person's mental health. The number of news that is not clear the source, until the company decides to work with its employees unilaterally due to COVID-19 can cause anxiety (Zhang and Ma, 2020).

Anxiety is an individual's emotional state and subjective experience, without specific objects due to ignorance and precedes all new experiences (WKJX, 2016). Data of (Kementerian, 2019) noted that there was an increase in the number of emotional, mental disorders, especially in Riau Province by 8 per mile in a period of 5 years (2013-2018). Anxiety disorders are the most common mental health concern in the United States. More than 40 million adults in the U.S. (19.1%) have anxiety disorders against COVID-19 (Lee *et al.*, 2020). Several ways that can reduce anxiety disorders, one of which is with Thought Stopping therapy.

Thought Stopping therapy is part of behavioral therapy that uses to help or help change the thought process, thinking habits can form behavioral changes, with automated thoughts alone can provide clues to the mind-

other thoughts that can be threatening. Thoughts that begin as small and ineffectual problems over time gather and important situations that can be difficult to stop. After all, it can be concluded that the technique of discontinuation of the popcorn is the best technique used when the disorder of the mind first appears (WKJX, 2016).

## Methods

### Research Design

Quasi-experiment study pre-post test control group design. This research was conducted to look at the effect of thought-stopping therapy on anxiety levels.

### Research Sample

The population in this study is people who experienced anxiety caused by COVID-19 in Pekanbaru city which has previously been screened on 200 heads of a family in Tampan Sub-district at random who experienced mild and moderate anxiety. Measurements of anxiety levels are carried out using specially designed instruments to assess anxiety during the COVID-19 pandemic.

The instrument used in assessing anxiety levels is the COVID-19 Peritraumatic Distress Index (CPDI) questionnaire. CPDI is an instrument that has conducted validity and reliability tests to be applied in China and Italy with Cronbach's  $\alpha$  coefficient male and female values of 0.89 and female 0.92 and the correlation coefficient  $>0.46$  (Costantini and Mazzotti, 2020; Qiu *et al.*, 2020). The results of the measurement of anxiety scores according to CPDI are: Normal, mild and moderate anxiety, severe anxiety so that the study sample taken was a client with a mild and moderate anxiety level of 64 head of a family with inclusion criteria:(1) Located in Pekanbaru area; (2) willing to be a respondent; (3) not in panic attacks; (4) does not take anti-depressant drugs and anxiety. Meanwhile, the exclusion criteria are: Do not follow the entire session.

### Data Collection

Before giving Thought Stopping Therapy, respondents measured on-site using CPDI questionnaire After getting the level of anxiety, although stopping therapy 3 sessions, namely session 1 "identifies unpleasant and disturbing experiences and stops one of the most disturbing thoughts". This experience can be one of the factors triggering anxiety to increase. Supported by fear, a sense of anxiety that is so severe and will aggravate one's anxiety (Koksal *et al.*, 2020). Session 2 is "stopping the first disturbing thought by using a varied count". Session 3 is "Evaluating the benefits of stopping annoying thoughts". After 3 sessions, the anxiety levels was re-measured using the CPDI questionnaire.

In session I, therapy is more focused on bad experiences in the past and what are the thoughts that bother the client and choose one mind to be trained to stop it. The worst experience in the respondent's past based on the assessment obtained was the loss of a much-loved person in the form of a parent, spouse, or child. This experience is one of the anxiety factors in the COVID-19 pandemic.

The therapist will guide the respondent to choose one of the thoughts to be trained. The therapist will set the alarm for 3 min and have the client close their eyes and empty the mind and then imagine the disturbing and threatening thoughts and stress as if it were going to happen (a previously chosen thought). Keep that in mind before the alarm goes off. The therapist shouts "STOP" at the time the alarm goes off. Instruct the client to open his eyes and breathe deep. Let the client relax for 1 min, helping the client to replace disturbing or stressful thoughts with other positive thoughts. Do thought-stopping exercises 3 times so that at the end of thought-stopping therapy comes positive thoughts automatically. After therapy, the therapist advises respondents to exercise to eliminate negative thoughts themselves.

Session II of this therapy trains with different mind disconnection techniques with recordings that will form and strengthen mind control. Record the word "STOP" in intervals of 1, 3 and 5 min. Has the client close their eyes and empty their minds and imagine disturbing, threatening and stressful thoughts as if they were about to happen (as per the client's choice in the second step). Keep that in mind before the recording goes off. Has the client shout "STOP" when the client hears a recording of the word "STOP". Then, let the client relax for 1 min and re-ask the thoughts that arise and the value of those thoughts whether positive or not. Next in session III focuses more on evaluating the benefits of stopping disturbing thoughts. However, if there are still disturbing thoughts can still be repeated in the previous session I and II (WKJX, 2016).

### Research Ethics

This research has passed the feasibility test (ethics test) research at the Faculty of Medicine Andalas University Padang. After that, the researchers will explain to respondents about the benefits, risks and impacts caused after the intervention. Respondents have the right to accept or reject the intervention to be given. Before the research was conducted, researchers had passed expert tests to obtain permission in providing therapy. After the data collection preparation was completed, the researchers processed 64 samples divided into 2 groups using random allocation. Respondents in the order of 1-32 were the intervention group and 33-64 were the control group.

## Result

Table 1 shows that respondents in both the intervention and control groups were almost half aged 33-39. Meanwhile, the religion of respondents from both intervention and control groups is almost entirely Islamic. The education of the respondents in the control group is the final secondary education and the intervention group is the college. The work of respondents in both control and intervention groups is mostly civil servants. Table 2 illustrates there is an effect of giving thought stopping

therapy for anxiety with a p-value of 0.000. However, in the control group, there was also a change in the pretest and posttest scores which is a p-value of 0.001. Based on Table 3 there is a difference in anxiety levels between the intervention group that has been given thought-stopping therapy and the control group which is p-value 0.000 (Fig. 1). Table 4 shows the stressor of the respondent. Most of the respondents stressor (63,7%) is economic problems are now reduced due to government rules on large-scale social restrictions.

**Table 1:** Respondents's characteristics

Characteristics	Intervention group (n = 32)		Control group (n = 32)	
	f	%	f	%
Age				
26-32 years old	13	40,6	10	31,2
33-39 years old	16	50	14	43,8
40-45 years old	3	9,4	8	25
Religion				
Islam	24	75	26	81,2
Protestant	8	25	6	18,8
Education level				
Elementary school	0	0	1	3,1
Junior high school	5	15,6	7	21,8
Senior high school	12	37,5	20	62,5
University	15	46,9	4	12,6
Occupation				
Private employee	11	34,3	11	34,4
Governmental	16	50	14	43,8
Entrepreneurial	5	15,7	7	21,8

**Table 2:** Pretest and posttest CPDI scores in intervention and control groups

Variabel	Mean	SD	p value
Intervention group (n = 32)			
Pretest	39,56	5,267	0,000
Posttest	36,97	5,527	
Control group (n = 32)			
Pretest	39,88	5,110	0,001
Posttest	40,53	4,938	

**Table 3:** Difference in CPDI scores in intervention groups given thought stopping with control groups not given thought stopping

Variabel	Mean	SD	p value
Intervention group (n = 32)	-2,59	0,946	0,000
Control group (n = 32)	0,66	1,004	

**Table 4:** Respondents's thought

No	Thoughts	f %
1	Economic problems are now reduced due to government rules on large-scale social restrictions	63,7
2	Fear of meeting others, fear if they can later contract Covid	13,2
3	Feeling poor body condition such as feeling something wrong or a big fear when body temperature rises	15,6
4	Fear of losing loved ones due to Covid	7,5

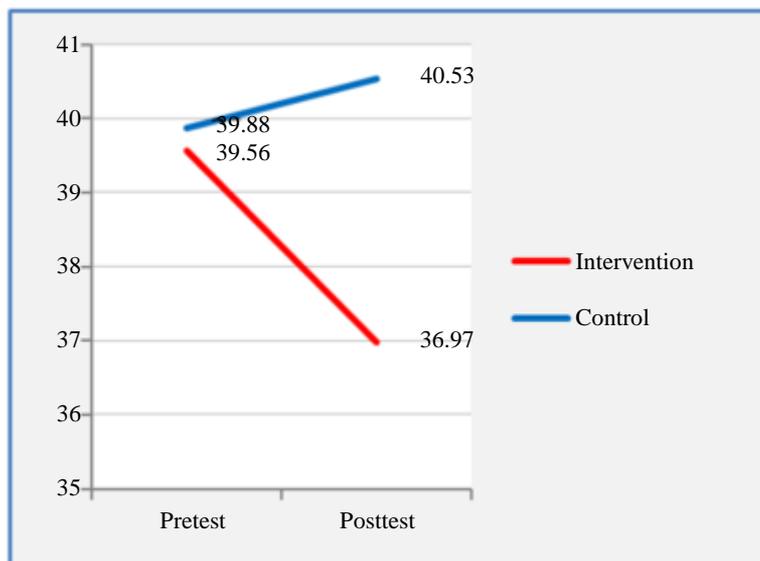


Fig. 1: CPDI pretest-posttest score

## Discussion

Research that has been done obtained results that there is an effect of the administration of thought-stopping therapy on anxiety levels. Thought stopping therapy lowered anxiety levels in the Intervention group. Shock or surprise response is one part of Thought Stopping Therapy (TS) that has an effect in lowering anxiety levels (Laela and Keliat, 2018).

Thought stopping therapy is not appropriate to be given in the pre-covid period. This is because thought-stopping therapy focuses on thoughts that disturb individuals now (Covid) and upcoming (Post-Covid) (WKJX, 2016). In the pre-covid period, suitable therapies in reducing anxiety experienced can still be done independently, such as deep breathing or distraction techniques, Progressive Muscles Relaxation (PMR) and spirituality. Research conducted by (Giyaningtyas and Hamid, 2019) where giving thought-stopping can help clients in self-control and stop negative thoughts that cause anxiety. This is in line with research conducted by (Kurniawan and Mulia, 2018) where after thought stopping clients become calmer and anxiety is felt slowly decreases.

Anxiety reactions in the body are inseparable from the role of neurotransmitters in the central nervous system, namely Gamma-Amino Butyric Acid (GABA) (Boonstra *et al.*, 2015; Hinton and Johnston, 2018). GABA is one of the neurotransmitters in the brain that works by tethering the process of potential action inside neurons (Spiering, 2018). At the time of anxiety, GABA is released into the amygdala and hippocampus as the center of emotional settings and bonding with GABA receptors will lead to a decrease in the activity of cells

involved in anxiety disorders, resulting in decreased anxiety (Stuart, 2016). Thus, the role of GABA neurotransmitters is as an inhibitor or the pharmacological therapy of the anxiety response (Jie *et al.*, 2018).

Decreased GABA concentration in the hippocampus will affect the dorsolateral prefrontal cortex on the right side of the brain and the frontal part of the hippocampus to reduce negative thoughts through interneuron tissue (Li *et al.*, 2019; Schmitz *et al.*, 2017). GABA produced by Ventral Tegmental Area (VTA) GABA neurons will suppress dopamine VTA activity in lowering anxiety reactions in clients (Bouarab *et al.*, 2019; Yu *et al.*, 2019). Thus, some GABA conditions are used as one of pharmacological therapies in reducing anxiety and sleep disturbances (Boonstra *et al.*, 2015; Jie *et al.*, 2018).

One way to activate VTA GABA naturally in the prefrontal part of the brain is to provide an unexpected stimulus that gives the client a surprise effect (Mellers *et al.*, 2013; Shany *et al.*, 2019; Wessel and Huber, 2019). Thought stopping given can give a surprise effect to clients by activating NAC and VTA GABA in releasing GABA (Kaur and Singh, 2017; Shany *et al.*, 2019). Release of GABA in the amygdala will suppress dopamine VTA activity so that the client's anxiety will decrease (Bouarab *et al.*, 2019; Hinton and Johnston, 2018; Schmidt-Wilcke *et al.*, 2018). In addition to the activity of VTA GABA, the surprise effect also activates the autonomy bridge of the frontal part of the P3b brain (shock response) with P3a (cognitive) so that it is suppressed from information previously inputs into the brain (Wessel and Huber, 2019). Thus thought stopping therapy is effective in lowering client anxiety and can be done in collaboration with other therapies (Malfasari and Erlin, 2017; Wahyuningsih, 2020).

## Conclusion

Anxiety about COVID-19 can be resolved in a variety of ways, one of which is by providing Thought Stopping therapy. The implication of this research that menjadi salah satu intervensi keperawatan dalam bidang Community Mental Health Nursing. This aims to prevent adaptive societies from becoming maladaptive. It is recommended for further research to combine thought-stopping therapy with other therapies to accelerate the reduction of individual anxiety, especially against COVID-19.

## Authors Contributions

**Shinta Dewi Kasih Bratha:** Developing the research proposal, conducting data collection and analysis, developing research report and drafting manuscript.

**Imron Rosyadi:** Main supervisor, provide feedback during data collection, analysis and report, proving manuscript.

**Dewi Eka Putr:** Acting as Co-supervisor, providing feedback during data analysis, report and proving manuscript.

## Ethics

This article is original and contains unpublished material. The corresponding author confirms that all of the other authors have read and approved the manuscript and no ethical issues involved.

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