Effectiveness of Reminiscence Therapy and Deep Breath Relaxation Therapy on Stress Levels of Elderly During the Covid-19 Pandemic

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Abstrak

In the COVID-19 pandemic, the triggering factor for stress among the elderlies is that they are afraid of contracting COVID-19, becoming a source of transmission, and dying from Covid-19. In fact, the level of risk of transmission and death in elderly patients is higher than in younger. This study aims determine the effectiveness of reminiscence therapy and deep breathing relaxation therapy on reducing stress levels in the elderly during the Covid-19 pandemic. This study used a quasi-experimental pre-posttest method. The sample was 32 elderlies who experience moderate and mild stress in Terong Tawah Village, chosen using the purposive sampling method. Data collection used the DASS questionnaire, analyzed using the paired T-test and the independent t-test. Results showed the average stress level before reminiscence therapy was 20,06 and after therapy was 14.06. Whereas, the average stress level before deep breathing relaxation therapy was 20.25 and after therapy was 17.06. There was an effect of reminiscence therapy and deep breathing relaxation therapy the stress levels of the elderly with ρ value = 0.00. However, there was no significant difference between the effectiveness of reminiscence therapy and that of deep breathing relaxation therapy. (p-value = 0.022, α = 0.05). It can be concluded that reminiscence therapy and deep breathing relaxation therapy are both effective in reducing stress levels in the elderly. Health workers can provide education about reminiscence therapy by involving the family and deep breathing relaxation for the elderly as an alternative therapy to reduce stress levels.

Key words: Deep Breathing Relaxation; Elderly; Stress; Reminiscence Therapy.

INTRODUCTION

A new virus appeared in the world, namely Corona Virus (SARS-Cov-2) and the disease was called Coronavirus disease 2019 (COVID-19) until it became a pandemic causing anxiety in society. This latest coronavirus outbreak started in Wuhan, China in December 2019. This virus attacks the human respiratory tract. Scientifically it is said that Covid-19 is prone to attack people who are already in old age. Studies of several patients with Covid-19 in China show the fact that the level of risk of transmission and death in elderly patients is higher compared to patients in the young category (Erlin, 2021). This means that increasing a person's age significantly affects the risk of death, the number of cases and the risk increase with age (Gordon et al., 2020).

Globally, by 2020 there will be an estimated 500 million elderly population. The World Health Organization (WHO) estimates that by 2025 the number of elderly people worldwide will reach 1.2 billion people (Friska, 2020). According to data from the Indonesian Central Bureau of

Statistics, there are 26.82 million people or 9.92% of the elderly in Indonesia in 2020. In NTB province, the number of elderly people is around 436,000 people or 8.21% of the total population in 2020. Elderly in West Lombok Regency in 2020 as much as 8.21% (BPS, 2020). The number of elderlies in the working area of the Perampuan Public Health Center reached 1,747 people and in Terong Tawah Village there was 305 elderlies.

The COVID-19 pandemic has changed all aspects of people's lives, especially the vulnerable elderly. Isolation for several months causes boredom, anxiety, and even stress. (Hirst et al., 2020). According to data from the Ministry of Health in September 2021 cases of Covid-19 in the world reached 219 million people and Indonesia was ranked 13th with the most cases of Covid-19, namely 4.22 million people. The elderly group has physical and psychological weaknesses in the COVID-19 pandemic. Around 20% of deaths of people with Covid-19 in China are over 60 years old (Yuliana, 2020). Worsening of the condition of Covid-19 patients and delays in healing are more common in the elderly and those who have previous co-morbidities such as hypertension, diabetes, heart disease (Yuliana, 2020). Data from the Ministry of Health stated that 47.3% of Covid-19 patients in Indonesia who died were elderly >60 years old. From this data, around 15,023 elderly people died from Covid-19 out of a total of 31,763 patients who died in the country. Where the age of the elderly is the highest compared to other age groups (Ministry of Health RI, 2021).

Around 70% of the death rate for Covid-19 patients in NTB occurs at the age of 45 and over and suffers from comorbid diseases (NTB Health Office, 2020). Covid-19 cases on September 6 2021, in West Lombok Regency in terms of the highest number of covid-19 cases ranked second in NTB, with a total of 3318 people and in the Covid-19 case update on September 5 2021 it was found that the Women's Health Center had the highest cases in the region West Lombok with a total of 174 cases and the number who died was 6 people. In the working area of the Perampuan Health Center the highest cases were in Terong Tawah Village with a total of 63 cases, there were 34 elderly people and the elderly died, namely 3 people. (West Lombok Health Office, 2021). The increase in the number of Covid-19 cases has had a negative impact on the mentality of the elderly, the elderly must carry out isolation and self-quarantine which makes the elderly tend to feel neglected.

The effects of isolation and quarantine are loneliness, sadness and prolonged stress. Preliminary research shows an increase in depression, post-traumatic stress, and adjustment disorder in old age (Armitage, 2020). This situation tends to get worse for the elderly in the community. They are afraid of being infected, becoming a source of infection, and dying from COVID-19. Misunderstanding due to lack of access to health information is also a cause of stress. Information about COVID-19 has even become an infodemic. Throughout the day, information about COVID-19 has graced TV, the internet, social media and everyday conversation. Hoax information content regarding vaccination is spread so that many people, especially the elderly group, do not want to be vaccinated and the reason is that vaccinations targeting the elderly as a priority are actually still low,

namely below 50%. This adds to the burden on the mind for the elderly which will cause stress for the elderly (Yuliana, 2020). The stress felt by the elderly can affect their life because it can cause loss of appetite, talk excessively or also withdraw. Stress can have negative effects, for example: dizziness, high blood pressure, irritability, sadness, difficulty concentrating, appetite changes and sleeplessness. In addition, stress can also make a person more sensitive or sensitive to depression, accidents, viruses, colds, heart attacks, and even cancer (Sutioningsih, 2019).

Based on the results of a preliminary study conducted by researchers on September 22, 2021 in Terong Tawah Village, the working area of the Perampuan Health Center, by conducting interviews with 10 elderly people, it was found that 30% of the elderly said it was difficult to relax, often felt anxious, and another 20% of the elderly said irritable, easily irritated. While 50% of the elderly say it is difficult to rest, are in a state of tension, and are easily agitated. The results of the preliminary study that stress problems occur in the elderly must be treated in the form of therapy to reduce the stress level of the elderly.

Therapeutic measures to reduce stress levels are pharmacological and non-pharmacological. Anti-anxiety and anti-depressants are given as pharmacological therapy for mental nursing. There are several non-pharmacological therapies that can be used to reduce stress levels, such as deep breathing relaxation techniques and reminiscence. Reminiscence therapy is very suitable to be applied to elderly who are stressed because it helps them to build new relationships, find strengths in themselves, build self-confidence, and develop positive thinking. This therapy is easy to apply and can be done by anyone (Song, Shen, Xu & Sun, 2017). Reminiscence Therapy is a therapy to reduce stress levels used as therapy for the elderly which aims to improve mental health status by remembering fun things in the past from childhood to adulthood (Kartika, 2018). Reminiscence therapy is aimed at recovering feelings of stress in the elderly and can be given to sufferers individually, in families or in groups. (Nixson, 2016). This research aims to identify the effectiveness of reminiscence therapy and deep breathing relaxation therapy on stress levels of the elderly during the covid-19 pandemic in Terong Tawah village.

METHOD

The research design of this study is Quasi-experimental with a two-group pretest-posttest approach. The population of this study was all elderly people aged over 65 years in Terong Tawah Village. The sample was 16 people which were obtained using the purposive sampling method with the inclusion criteria of the elderly who experience mild and moderate stress, live with their families and are allowed to involve their families, are willing to be respondents, do not have hearing loss and dementia, and who are able to communicate verbally. The exclusion criteria were the elderly who were reluctant to be the sample in the study, the elderly who did not attend all therapy sessions, and the elderly who experienced mental disorders.

The research instrument used a modified stress level questionnaire (DASS 42) from Debanjan Banerjee's research to assess stress levels in the elderly during the Covid-19 Pandemic situation. In the first group, reminiscence therapy was carried out in 5 sessions. Session 1 was the first meeting where the elderlies and the families get an explanation of the process and the study objectives. Session 2. the elderlies telling their childhood experiences. In session 3, the elderlies talked about their adolescence experiences. In session 4 the elderlies shared their adulthood experiences. In the last session, the elderly talked about their time with family in home. Each session was carried out in 30 minutes in the elderlies' homes, every 2 days.

In the second group, deep breathing relaxation therapy was given twice a day for a week. The statistical analysis was used in two stages using univariate analysis and bivariate analysis. Bivariate analysis in this study used a parametric test, specifically the paired T-test to analyze data on stress levels of the elderly before and after the intervention of reminiscence therapy and deep breathing relaxation therapy and to compare the effectiveness of the two treatment groups using the independent t-test with the help of the SPSS application in a level significant

RESULT

Univariate analysis is carried out to obtain data on the characteristics of the respondents including: age, education, gender, occupation, and disease, pre-test stress level, post-test stress level. The data obtained in this study are as follows:

Table 1. Respondents by Age, Gender, Education, Employment, diseases and stress level

Characteristic	Reminiscence Therapy		Deep Breath Relaxation Therapy	
	n	%	n	%
Age Category:				
- 64-79	6	37	7	44
- 79-90	10	63	9	56
Gender:				
- Male	5	31	2	12
- Female	11	69	14	88
Education:				
- No Education	8	50	5	31
- Basic Education	5	31	8	50
- Intermediate Education	3	19	3	19
Employment:				
- Employed	5	31	5	31
- Unemployed	11	69	11	69
Disease:				
- Not suffering	4	25	7	44
from illness	12	75	9	56

- Suffering from illness				
Stress Level:				
- Mild Stress	6	37	5	31
- Moderate Stress	10	63	11	69

Most respondents were in the age category of 75-90 years. Most respondents in the two groups are female were female which 11 respondents (69%) in the reminiscence therapy group and 14 respondents (88%) in the deep breathing relaxation therapy group. Regarding the education of the respondents, most of them did not go to school in the reminiscence therapy group with 8 respondents (50%) and in the deep breathing relaxation therapy group, most of them which 8 respondents (50%) with basic education (elementary and junior high school). The majority of respondents in both groups was unemployed, namely 11 respondents (69%). Based on medical history, most of the respondents were suffering from illness, namely 12 respondents (75%) in the reminiscence therapy group and 9 respondents (56%) in the deep breathing relaxation therapy group. For the category based on the stress level of the respondents before being given the intervention, most of them experienced moderate stress, with 10 respondents (63%) in the reminiscence therapy group and 11 respondents (69%) in the deep breathing relaxation group

Table 2. The Stress Level of Respondents after given Reminiscence Therapy and Deep Breathing Relaxation

Stress level	Reminiscence Therapy		Deep Breathing relaxation	
	n	%	n	%
No stress	8	50	2	12
Mild stress	7	44	8	50
Moderate stress	1	6	6	38
Total	16	100	16	100

Table 2 shows the level of stress after being given therapy in the reminiscence therapy group, most of them were normal or did not experience stress by 8 respondents (50%) and in the deep breathing relaxation therapy group, most of them experienced stress in the mild category with 8 respondents (50%).

Table 3. Results of paired t-test on stress level pre-post in both groups

Groups	Mean	Value		Deviation standard	ρ
		Max	Min		
Reminiscence Therapy					
Pre-test	20,0625	25	16	2,99931	0,0000

Post test	14,0625	19	6	4,04094	
Deep breathing relaxation therapy					
Pre-test	20,2500	25	15	3,08761	0,0000
Post test	17,0625	21	10	2,88603	

Table 4. Results of independent t-test on the stress level posttest in both groups

Groups	Mean	Standard deviation	Asymp. Sig.(2- tailed) ρ
Reminiscence Therapy	14,06	4,041	0,022
Deep breat hing relaxation therapy	17,06	2,886	0,023

Table 3 and 4 showed the results of paired and independent t-test. Table 3 showed the different between the stress level on pre and post test in both groups. Table 4 showed no differences on the stress level between the two groups of intervention.

DISCUSSION

The Effect of Reminiscence Therapy on Stress Levels in the Elderly

The results of the paired t-test obtained p = 0.00 <α = 0.05, which means that giving reminiscence therapy causes stress levels in the elderly to decrease. The results of the study before and after giving the reminiscence therapy intervention showed a decrease in stress scores from the 19-25 category (moderate stress) to the 15-18 category (mild stress) even in the normal or not experiencing stress category 0-14 (normal). Stress in the elderly after therapy most of the stress in the category of mild and normal or not experiencing stress.

Reminiscence therapy is therapeutic, meaning it can heal. it is because reminiscence therapy can affect the neurotransmitters in the brain, so that a person can reminisce about something that is fun thereby it will be mentally healthy, and can release chemical compounds, when experiencing pleasant events. The brain will store the same chemical patterns that we enter when healthy events occur. To balance bad memories, it is important to remember the pleasant past because it can evoke feelings of joy and can reduce stress in the elderly (Julianto, 2018). Reminiscence therapy is very suitable to be applied to the elderly who are stressed because in this way they can build new relationships, are able to find strengths in themselves, build self-confidence, and develop positive thinking. This therapy is easy to apply and done (Song, Shen, Xu & Sun, 2017). Providing reminiscence therapy is quite important considering the impact of stress which causes big problems if the elderly cannot adapt, it can cause depression (Vitaliati, 2018).

Supported by the research of Dian Dwiana et al, (2019) that reminiscence therapy can also reduce depression in the elderly. Reminiscence therapy focuses on pleasant events in the

elderly, so that by telling and discussing these, the elderly become happy, proud, and can increase their self-integrity and get positive reinforcement so they can eliminate unpleasant events. Reminiscence therapy can help the elderly to recall positive aspects and things that are meaningful to the elderly that have been experienced by the elderly in their past. This process is expected to help the elderly to assess the life they have lived up to the present age, so that the elderly can feel satisfaction with their life (Faida, 2018). Reminiscence therapy is a therapy to reduce stress levels, for the elderly it aims to improve mental health status by remembering fun things in the past from childhood to adulthood (Kartika, 2018). Reminiscence therapy is given to sufferers individually, in families, and in groups (Nixson, 2016). Remembering pleasant past memories and sharing the story can help the elderly interact with their families, so that the elderly is able to adapt to stress.

The Effect of Deep Breathing Relaxation Therapy on Stress Levels in the Elderly

The results of the paired t-test $\rho = 0.0000$, indicating that there is an effect of breathing relaxation therapy in reducing stress levels in the elderly. After given deep breathing relaxation therapy intervention, there was a decrease in the stress score from the 19-25 category (moderate stress) to the 15-18 category (mild stress) even in the normal or not experiencing stress category 0-14 (normal). Stress in the elderly after therapy most of the stress in the mild category. This shows that the treatment of stress in the elderly does not always use medical or pharmacological treatment, deep breathing relaxation therapy is therapeutic and healing in nature (Kushariyadi, 2011).

The proper breathing process in deep breathing relaxation techniques will cause a general relaxed state in humans. Relaxed feelings will be continued to the hypothalamus to produce Corticotropin Releasing factor (CRF). Furthermore, CRF stimulates the pituitary gland to increase the production of Proopiomelanocortin (POMC) so that Enkephalin production by the Adrenal Medulla increases. The pituitary gland also produces endorphins as neurotransmitters which affect the mood to relax. The increase in enkephalin and endorphins will fulfill the need for sleep and the elderly will feel more relaxed and comfortable (Novitasari & Aryana, 2013).

After given deep breathing relaxation therapy, the elderly said they felt something different from before, for example the body became more relaxed slowly, the mind became calm and slowly sleep became sounder and they were not easily agitated or anxious which often felt reduced. In line with the results of the research conducted, after being given deep breathing

relaxation therapy, 13% were found in the normal stress category (0-14), 50% in the mild stress category (15-18), and 38% in the moderate stress category (19-25).

Deep breathing relaxation therapy has a slightly effective effect on reducing stress levels in the elderly. This deep breathing relaxation therapy will improve health because this therapy will help the body become more relaxed when breathing deeply and the brain will receive messages to calm down. The brain will then continue the same message throughout the body. Breathing exercises will also help clear the mind, because the body's circulation improves and more oxygen flows to the brain so that the stress experienced by the elderly is reduced. The advantages of practicing relaxation techniques compared to other exercises are that relaxation exercises are easier to do even under any conditions and do not have any side effects. Besides that, relaxation techniques are easier for respondents to implement, can reduce medical costs, and can be used to prevent stress. Also supported by research from Rahma Elliya (2021) showing the effectiveness of giving Deep Breathing Relaxation therapy for Reducing Stress in the Elderly at UPTD Elderly Social Services Tresna Werdha Natar South Lampung in 2019. Based on the results of the study, deep breathing relaxation therapy have an effect on stress levels in the elderly. Most of the elderly who received deep breathing relaxation therapy expressed feelings of relaxation.

The Different Effectiveness between Reminiscence Therapy and Deep Breathing Relaxation Therapy on Stress Levels in the Elderly

Based on the results of the study, it can be concluded that there is no difference in the effectiveness of Reminiscence Therapy and Deep Breathing Relaxation Therapy on stress levels in the elderly. A study conducted by Kartika and Mardalinda (2017) showed that in the intervention group, there was a change after being given Reminiscence Therapy from moderate stress to mild stress where the stress level before the intervention was 22.25 points and after the intervention changed into 16.60 points. It shows that there is an effect of reminiscence therapy on stress levels in the elderly.

Reminiscence therapy and deep breathing relaxation therapy are effective for reducing the stress level of the elderly where the results of the research from reminiscence therapy after treatment found that 94% decreased stress levels with the moderate stress category to mild stress even normal or not stressed while in the deep breathing relaxation therapy treatment after treatment it was found that 63% experienced a decrease in stress levels from moderate stress to mild stress, even normal or no stress. Based on research, reminiscence therapy is more dominant in experiencing a decrease in stress levels from breathing relaxation therapy. In this

case, the value (Mean) of reminiscence therapy is 14.06, while deep breathing relaxation therapy is 17.06 after being given the intervention. This can happen because it is caused by respondents who enjoy given reminiscence therapy more by involving their families. The elderly can share about pleasant past events with reciprocity with family and researchers. The elderly can feel happy when the telling their stories, because they can maintain eye contact, they can laugh together with the audience. This situation can help reduce their stress level.

CONCLUSSION

Nurses need to help elderly overcome their stress and reduce their stress levels. Nurses can either provide a deep breathing relaxation therapy or a reminiscence therapy to help them. This study result showed no significant difference on the effectiveness of the two therapies. Nurses can choose one therapy that suits the patients best.

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