MJN COMPARISON OF THE EFFECT GROUP ACTIVITY THERAPY: PERCEPTION STIMULATION AND DEEP BREATH THERAPY

Omay Rohmana^{1*}, Ati Siti Rochayati¹, Eyet Hidayat¹, Tukimin Bin Sansuwito²

¹Poltekkes Kemenkes Tasikmalaya Cirebon Campus, Indonesia ²Faculty of Nursing, Lincoln University College, Malaysia

*Corresponding Author's Email: omay_rohmana@yahoo.com

ABSTRACT

Hypertension ranks first a degenerative disease that affects the elderly with a prevalence of 45.9% at the age of 55-64 years, 57.6% at the age of 65-74 years, and 63.8% at the age of 75 and over. Stress is one of the risk factors for hypertension in the elderly. Various studies show stress has a strong influence on the onset of hypertension in the elderly, also contributing as much as 9% to the risk of developing hypertension. Perceptual stimulation group activity therapy and deep breaths are non-pharmacological methods of treating psychological stress. The purpose of this study was to determine the effect of group activity therapy (TAK): perceptual stimulation and deep breaths on the stress level of the elderly in Cirebon City. Experimental research design preand post-intervention, elderly population with essential hypertension in Sitopeng Health Center Cirebon City on total sample of 32 people with simple random sampling technique, and data analysis using the technique Mann Whitney and Wilcoxon was done. There were differences in stress levels in the elderly in Cirebon City after treatment in the activity therapy group: perceptual stimulation and deep breathing therapy, where the value of $\alpha = 0.031 < 0.05$. Puskesmas can use a group activity therapy approach in carrying out activities (for example, health promotion), which can have a positive effect on the emotional health of the elderly.

Keywords: Perceptual Stimulation TAK; Stress Level

INTRODUCTION

Incidence of hypertension in Indonesia continues to increase. Basic Health Research (Riskesdas) in 2018, showed an increase in the prevalence of hypertension in 2018 (34.1%) when compared to 2013 (25.8%) (Indonesia, 2019). The prevalence of hypertension is predicted to increase 60% in 2025, which is about 1.56 million sufferers and this is a risk factor for cardiovascular disease and is responsible for most deaths in the world (Adrogué & Madias, 2007). The WHO-Community Study of the Elderly Central Java Research found that hypertension and cardiovascular disease are the second most common diseases suffered by the elderly after arthritis, amounting to 15.2% of the 1203 samples (Nugroho, 2000). Among the ten types of diseases that are commonly suffered by the elderly, such as arthritis, stroke, chronic obstructive pulmonary disease, diabetes mellitus, hypertension, cancer, coronary heart disease, kidney stones, heart failure, and kidney failure, hypertension ranks first with many degenerative diseases. Elderly with a prevalence of 45.9% at the age 55-64 years, 57.6% at the age 65-74 years, and 63.8% at the age 75 and over (Depkes RI, 2014).

Hypertension in the elderly can be caused by various factors. Factors that cannot be changed or controlled are age, gender, family history, genetics and factors that can be changed / controlled) such as smoking habits, salt consumption, saturated fat consumption, use of waste, alcohol consumption habits, obesity, lack of physical activity, stress, use of estrogen (Dina, et al., 2013; Artiyaningrum, 2015). Based on research of Putri, Endra, Rahayu (2018) it can be said that stress factors have a strong influence on the onset of primary hypertension (p = 0.000; r = 1,000) in the elderly at Dinoyo Malang Health Center. Psychological stress contributes 9% to the risk of developing hypertension (Hu et al., 2015). Stress is also possible to be a very strong risk factor and can influence or lead to other risk factors in the form of changes in behavior or changes in diet (Putri, Endra & Rahayu, 2018). Wilkinson (2002) states that stress can cause or trigger indigestion, some people develop inflammation of the bladder, increased blood pressure and the risk of heart attack and hair loss.

Various therapies can be done to deal with psychological stress, both pharmacological and nonpharmacological. Group activity therapy: perceptual stimulation and deep breath relaxation techniques are among the non-pharmacological therapies that can reduce stress levels in the elderly. However, it is not yet known which therapy is more effective in reducing stress levels in the elderly. Therefore, this study compared the effect of group activity therapy: stimulation of perception with deep breath relaxation therapy to reduce stress levels in the elderly.

Literature Review

Elderly is someone aged 60 years and over (Hardywinoto, 2008). In addition, Law Number 36 of 2009 Article 1 paragraph (2), concerning health, states that: Elderly is everyone aged 60-70 years (Depkes RI, 2009). Nugroho (2008), states that the elderly are either male or female individuals aged between 60-69 years.

The elderly experience various changes as they get older. These changes include physiological changes, cognitive changes, and psychosocial changes. The deteriorating physiological state resulting from the aging process is a major factor in anxiety. Physical changes that occur can include the nervous system, hearing, vision, cardiovascular, body temperature regulating system, musculoskeletal, respiratory, gastrointestinal, genitourinary and endocrine, (Perry & Potter, 2005). Cognitive changes can occur in which the thought process begins to slow down, forgetfulness, confusion and dementia, short-term memory loss and new ones are common (Fatimah, 2010). Psychosocial changes can be seen from the ability to adapt to physical, social, emotional losses and achieve happiness, peace and life satisfaction. The fear of getting old and unable to be productive anymore creates a negative picture of the aging process. Many cultures have contributed to this negative perception, where the elderly are seen as individuals who do not have any contribution to society and is regarded as waste economic resources (Fatimah, 2010).

These changes are a factor that triggers stress in the elderly. Stress is a common thing that happens and is faced by everyone in their life. Stress is the non-specific body's response to any demands or burdens on it (Jaka, Prabowo & Dewi, 2015). Yunitasari (2011), explains stress is the body's reaction to situations that cause pressure, change, and emotional tension. Stress is the inability to cope with the threat faced by the mental, physical, emotional and spiritual pressure, whichp at one time may affect the health of individuals (Cohen *et al.*, 2016).

the various symptoms that appear. According to Indriana et al., (2010), the symptoms of stress are 1) Physiological symptoms, including: rapid heart rate, sweating a lot (especially cold sweat), disturbed breathing, tense muscles, frequent urge to urinate, difficulty sleeping, gastric disorders and so on, 2) Psychological symptoms, including: restlessness, frequent confusion, difficulty concentrating, difficulty making decisions, feeling overwhelmed (exhausted) and so on, 3) Behavior, including: talking very fast, biting nails, shaking legs, tics, shaking, change in appetite (increase or decrease) and so on. Stress can also have various impacts on life. Yunitasari (2011) states that the physical reactions caused when experiencing stress are sweaty hands, pale face and very cold hands, headaches, mouth sores, asthma and lung problems. Stress can cause or trigger indigestion, some people develop inflammation of the bladder, increased blood pressure and the risk of heart attack and hair loss. Mentally, emotionally, a person becomes irritable, changes in diet (it could be no appetite or may increase appetite), and decreased selfconfidence. Intellectually, stress interferes with a person's perception and ability to solve problems, decreases in concentration and attention span, deteriorates memory both long and short term, this situation will cause people to become forgetful, unable to think clearly, more errors in problem solving activities and decreased ability to make action plans. It is seen that social stress will disrupt an individual's relationship (Yunitasari, 2011).

Stress can be overcome in various ways. Sukadiyanto (2010) suggests several ways to reduce stress, including: through a healthy and nutritious diet, maintaining physical fitness, breathing exercises, relaxation exercises, doing fun activities, taking vacations, establishing harmonious relationships, avoiding bad habits, planning activities daily routine, take care of plants and animals, take time for yourself (family), avoid yourself in solitude.

Group activity therapy is a way to deal with stress. Group activity therapy is recreational, and creative techniques to facilitate one's experience and increase social response and self-esteem (Wahab, 2014). Gibson & Mitchell, (2011) suggest that group activity therapy is a therapy that refers to providing experiences for individuals who need help with adjustment, emotional disturbances or serious obstacles.

Elderly who experience stress maybe detected from

Keliat et al., (2011); Hendarsih (2012), suggested

Group Activity Therapy for Cognitive Stimulus / Perception which is a group activity therapy that uses a stimulus as a tool. This therapy is carried out by perceiving real, everyday stimuli related to life experiences and alternative solutions. The stimuli provided include reading articles / magazines / books, watching TV shows, and stimuli from past experiences that result in maladaptive or destructive client perception processes such as anger, hatred, breakups, negative views on people. With the application of group activity therapy, the client's perceptual ability is evaluated and improved at each session.

In addition, stress in the elderly can also overcome stress through breathing exercises, relaxation exercises (Sukadiyanto, 2010). Relaxation is a technique that relaxes the mind and body through a process that progressively releases the tension in the muscles in our body. Doing relaxation exercise can reduce excessive fatigue and reduce stress, as well as various symptoms associated with anxiety, such as headaches, migraines, insomnia, and depression (Potter & Perry, 2005). Relaxation is a self-management technique based on the workings of the sympathetic and parasympathetic nervous systems. Energy can be generated when we relax with deep breaths because when we exhale, we release carbon dioxide as impurities from combustion and when we inhale it again, oxygen is needed by the body to clean the blood (Resti, 2014).

METHODOLOGY

This study is an experimental study with pretestpostest intervention approach (Notoatmojo, 2010). The study population was all elderly in the Sitopeng Community Health Center Cirebon City totaling 193 people. The sample of 32 people was divided into 2 groups, namely 16 people each with group activity therapy intervention: perceptual stimulation and deep breath relaxation technique intervention. The sampling technique is simple random sampling. Inclusion criteria: 1) elderly, both male and female, 2) willing to be respondents, 3) aged 60 - 65 years. Exclusion Criteria: Elderly with essential hypertension who have complications of stroke, heart disease, kidney failure. Research Instruments The stress level assessment used the DASS (Depression Anxiety Stress Scale) instrument from Lovibond & Lovibond, (1995). Data analysis using computer software, both univariate and bivariate.

RESULTS

Table 1: Stress Levels in the Elderly in the Pre-Intervention and Post-Intervention Groups TAK:Perceptual Stimulation

Pre -intervention					Post-intervention				
Criteria	f	%	Mean	SD	f	%	Mean	SD	
Normal	3	18.8	2.25	0.856	10	62.5	1.38	0.5	
Mild stress	7	43.8			6	37.5			
Moderate stress	5	31.3							
Severe stress	1	6.3							
Total	16	100			16	100.0			

Based on table 1, the results showed that in the group treatment TAK: perceptual stimulation, the stress level of the pre-intervention elderly was moderate stress 31.3% (5 people) and severe 6.3% (1 person). At the time of post-intervention, the stress level of the elderly experienced changes, namely a moderate and severe stress level of 0%, most of which was normal 62.5% (10 people).

Table 2: The Stress Levels of the Elderly in the Pre-Intervention and Post-Intervention groups in the DeepBreathing

The Pre-intervention						Post-intervention			
Criteria	f	%	Mean	SD	f	%	Mean	SD	
Normal	5	31.3	2.06	0.929	5	31.3	1.94	0.772	
Mild stress	6	37.5			7	43.8			
Moderate stress	4	25.0			4	25.0			
Severe stress	1	6.3							
Total	16	100			16	100.0			

Based on table 2, The results show that deep breathing therapy group, the stress level of the preintervention elderly was medium stress 25% (4 people) and severe 6.3% (1 person), and at post-intervention there was little change, namely moderate stress remained 25%(4 people) and 0% severe, with the most mild stress 43.8% (7 people).

Table 3: Differences in Stress Levels in the Elderly inCirebon City between Pre-Intervention and Post-Intervention

Group	Ν	Mean Rank	z	р
TAK : perceptual stimulation	16	6.00	3.125 b	0.002
Deep breath therapy	16	4.25	-0.520b	0.603

Based on table 3, the results show that there is a difference in stress levels in the elderly in Cirebon City between pre and post-intervention in the treatment group TAK: perceptual stimulation, where the value of $\alpha = 0.002 < \text{from } 0.05$, but there is no difference in stress levels in the elderly in Cirebon City between pre and post-intervention in the group: deep breath therapy, where the value of $\alpha = 0.603 > \text{from } 0.05$.

Table 4: Differences in Stress Levels in the Elderly inCirebon City between the Treatment Groups: TAK:Perceptual Stimulation and Deep Breath Therapy

Criteria	Ν	Z	р
Pre-intervention group TAK: Perception stimulation - deep breath therapy	32	-0.637	0.524
Post-intervention group TAK: Perception stimulation - deep breath therapy	32	-2.153	0.031

Based on table 4, the results showed that there was no difference in stress levels in the elderly in Cirebon City in the pre-intervention between treatment groups TAK: Perceptual stimulation and deep breath therapy, where the value of $\alpha = 0.524 > 0.05$, but at postintervention there was a difference in the stress level of the elderly in Cirebon City between the treatment groups: Perceptual stimulation and deep breath therapy, where the value of $\alpha = 0.031 < 0.05$.

DISCUSSION

Group activity therapy: Perceptual stimulation is effective in overcoming stress in the elderly. This therapy is carried out by perceiving real daily stimuli related to life experiences and alternative solutions (Keliat and Akemat, 2005). Khamida & Meilisa (2016) group activity therapy: perceptual stimulation can reduce anxiety levels in the elderly by as much as 75% and has a significant effect in reducing anxiety levels in the elderly (p=0.003). In addition, stress can lead to negative behavior in the elderly, such as anger. Group activity therapy: stimulation of perceptions can increase the ability of the elderly to recognize and control negative behavior. The results of Wibowo's research (2012) show that group activity therapy: stimulation of perceptions can improve the ability to recognize and control violent behavior.

Self-esteem in the elderly can undergo changes which often result in feelings of uselessness and worthlessness. This is one of the sources of psychosocial stressors in the elderly (Hawari, 2007). Setiawan (2016), found that there was a significant effect of giving group

activity therapy: perceptual stimulation on increasing self-esteem in the elderly (p < 0.05). The average of elderly respondents is known to experience an increase in self-esteem scores of 5.94 per respondent from the average before group activity therapy: perceptual stimulation of 31.88 and increased to 37.82 after receiving therapy activity: perceptual stimulation. Wahab (2014) who also found that there was a significant effect of group activity therapy on increasing the selfesteem of the elderly at the Mojorkerto Nursing Home in 2014 (p < 0.05) where on average the elderly experienced an increase in self-esteem scores by 5.5. The Research by Suzanna, Mustikasari, Wardani, (2016), showed that there was a significant decrease in depression in the elderly with low self-esteem in both groups with a decrease of 67.4% in the intervention group and 31.9% in the control group (p=0.000 < 0.05)

Deep breath relaxation is to achieve more controlled and efficient ventilation and reduce breathing work, increase maximum alveolar inflation, increase muscle relaxation, relieve anxiety, get rid of useless, uncoordinated patterns of activity of the respiratory muscles, slow down the frequency of breathing, reduce air flow and reduce the work of breathing (Smeltzer & Bare, 2002).

This study shows the results, deep breath therapy does not show statistically significant results, where the value of $\alpha = 0.603 > 0.05$. Before receiving deep breath therapy, the elderly who experienced a severe stress level of 6.3% (1 person) and 25% moderate stress (4 people), meanwhile after receiving therapy, the elderly who experienced severe stress became 0% and moderate stress remained at 25% (4 people). This is probably since deep breath therapy is more effective for physical and acute problems. Smeltzer & Bare (2010) stated that the main purpose of relaxation is to help patients relax and improve various aspects of physical health. Another research by Utami (2016), reported that this relaxation technique was effective in reducing pain in patients after abdominal surgery. Research work of Anggraeni (2020) showed that there was a significant difference in systolic and diastolic blood pressure before and after the intervention of deep breath relaxation techniques with a *p*-value of 0.000 (<0.005). Dewi, Setyoadi & Widastra (2009), stated that there was a significant effect between the provision of deep breath relaxation techniques and a decrease in pain perception in the elderly with rheumatoid arthritis (p = 0.005). In

addition, in this case, the frequency of deep breath therapy is not done regularly and continuously, for example, it is done at least 3 times a day and done every day. This is consistent with the research of Nasuha, Widodo & Widiani (2016) which shows positive results (p value 0.001 < 0.05), where deep breathing therapy are carried out regularly at least 3 times a day. Syamsiyah (2019) reported on the effect of deep breath therapy on sleep quality in the elderly, shows an increase in sleep quality that is 68.9% better after being given for one week continuously.

CONCLUSION

Group activity therapy: perceptual stimulation, can significantly reduce stress levels in elderly people, on

the other hand, deep breathing therapy does not significantly reduce stress levels in the elderly in Cirebon City. It is suggested to encourage health center institutions to carry out activities in the form of group activity therapy (such as health promotion) so that it can have a positive effect on the emotional health of the elderly.

Conflict of Interests

The authors declare that they have no conflict of interest

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