

The Effectiveness of Progressive Muscle Relaxation on Reducing Depression Levels in the Elderly in Workplaces Muslim Elderly Home

Saka Adhijaya Pendit¹, Dayuningsih¹, Anissa Dwi febriana¹

¹STIKes RSPAD Gatot Soebroto, Jakarta, Indonesia

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Corresponding Author :

Saka Adhijaya Pendit

E-mail : sakapendit@gmail.com

ABSTRACT

Background & Objective: Depression can arise due to increased stress factors and reduced adaptability in older adults. Its effects include decreased appetite, weight loss, digestive problems, and sleep disorders. On the other hand, the psychological effects that can be caused by depression include the risk of suicide. Progressive muscle relaxation therapy is carried out in stages. This helps reduce muscle tension caused by depression, so that the body becomes relaxed and the mind calm. ROP therapy activates the parasympathetic nervous system and regulates the hypothalamus to reduce stress signals, thereby reducing stress levels in the elderly, especially those experiencing depression. The purpose of this study was to analyze the effectiveness of progressive muscle relaxation in reducing depression levels in elderly people in the Muslim Nursing Home Work Area. **Method:** The research design was quasi-experimental, using a pre-post test single group design with a sample size of 15 respondents and purposive sampling according to the inclusion criteria. Depression levels were measured using the Geriatric Depression Scale (GDS) instrument. The data were analyzed using the Wilcoxon test. **Result:** The results showed that progressive muscle relaxation therapy was effective in reducing depression levels in the elderly with a p-value (0.002) < p-value (0.05). This means that progressive muscle relaxation therapy is effective in reducing depression levels in the elderly in the Muslim Nursing Home Work Area. **Conclusion:** Based on the results of the study, progressive muscle relaxation therapy is more effective in helping to reduce depression levels in the elderly. Progressive muscle relaxation therapy is beneficial for reducing depression in the elderly

and is recommended as a non-pharmacological nursing therapy.

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Introduction

An elderly person is someone aged 60 years and over. Elderly people tend to experience physical, psychological, social, and environmental changes. These changes can lead to health problems (Ati et al., 2022). Physical changes in the elderly can be characterized by sagging skin, graying, loss of vision, decreased activity, and a decline in health. Psychological changes can be seen in memory loss or emotional changes and dementia. Social and economic changes, such as leaving work due to retirement, mean that those without a source of family income must continue working even though they are physically unable to work, fear of being isolated from their families, fear of being ignored by their children, and the loss of friends and loved ones, can trigger depression and other mental health problems in the elderly. (Andriani & Sugiharto, 2022)

Depression is an unclear feeling or emotional response caused by elderly people who do not have a specific object Female gender, do not have a partner (not married, divorced, or widowed), lack of social interaction or social life, experiencing stressful life events, physical disabilities (cancer, amputation, surgical scars, or heart disease), have a history of depression in the family, and fear of becoming depressed. (Ministry of Health of the Republic of Indonesia, 2019). According to the World Health Organization (WHO), as many as 61.6% of elderly people are found to suffer from depression (Safira et al., 2024). However, Mental Health America (2022) states that at least two million of the 34 million Americans over 65 years suffer from depression (Padaunan et al., 2022). In Indonesia, the prevalence is quite high, with 76.3% in elderly people aged 55-64 years, 15.9% in elderly people aged 65-74 years, and 23.2% in elderly people aged 75 years and over. (Riskesdes, 2018).

Untreated depression can lead to serious psychological problems for the elderly. Treatment for depression in the elderly can involve pharmacological and non-pharmacological treatments. Pharmacological treatments have a lower risk of side effects than non-pharmacological treatments. (Azhrah Fatimah Ayunurrochim et al., 2024). Non-pharmacological treatments include aromatherapy, meditation and mindfulness, yoga, acupressure laughter therapy, religious therapy, and progressive muscle relaxation therapy (Arjuna & Rekawati, 2020). Furthermore, progressive muscle relaxation (ROP) therapy reduces pain, heart rate, cortisol, and blood pressure. This helps the mind and body relax (Pradesstetia et al., 2021). A study conducted by Azhrah Fatimah Ayunurrochim et al., 2024 found that progressive muscle relaxation (ROP) therapy is effective in reducing depression in the elderly. This study found that this therapy can reduce moderate depression (score 11) to mild (score 5) within 7 days. This is because ROP therapy activates the parasympathetic nervous system and regulates the hypothalamus to reduce stress signals, which in turn reduces stress levels in the elderly, especially those experiencing depression.

A preliminary study conducted at the Rumah Opa dan Oma Muslim Nursing Home, conducted by interviewing three elderly people, revealed that the elderly interviewed reported occasional feelings of loneliness, boredom, sadness, emptiness, and anxiety due to their persistent illness.

Objective

The purpose of this study was to analyze the effectiveness of progressive muscle relaxation in reducing depression levels in elderly people in the Muslim Nursing Home Work Area.

Method

This research is a quantitative research with the type of experimental research and the design used Quasi-Experimental one-group pre-post test design. This design only conducts interventions on one group. The design model used is one-group pre-post test, namely the experimental design of the pretest before treatment and posttest after being given treatment with Progressive Muscle Relaxation on Reducing Depression Levels in the Elderly in the Working Area of the Muslim Nursing Home.

<i>Pre-Test</i>	ROM	<i>Post Test</i>
A	X	B

Research samples are a portion of the population selected to be directly observed and used as a basis for drawing conclusions (Nuryadi, 2017). The sampling measurement method according to Roscoe in Sayidah, (2018:106) for simple experimental research with experimental control, successful research with small sample sizes, namely 10-20, using purposive sampling techniques.

Results

Univariate Analysis Results

1. Pretest overview of the Geriatric Depression Scale (GDS) before being given

TABLE 1. Frequency Distribution of Geriatric Depression Scale (GDS) Pretest in the Working Area of Muslim Nursing Homes in December 2024 (n=15)

Depression Level	Frequency (f)	Percentage (%)
Mild Depression	13	86.7%
Moderate Depression	2	13.3%
Total	15	100.0

The results of table 1 show that the respondents who had the highest level of depression in the pretest were mild depression, namely 13 respondents (86.7%), while the lowest level of depression was moderate depression, namely 2 respondents (13.3%).

2. Posttest Geriatric Depression Scale (GDS) overview after administration

TABLE 2. Frequency Distribution of Geriatric Depression Scale (GDS) Posttest in the Working Area of Muslim Nursing Homes in December 2024 (n=15)

Depression Level	Frequency (f)	Percentage (%)
Not Depressed	8	53.3%
Mild Depression	7	46.7%
Total	15	100.0

The results of table 2 show that the highest number of respondents who experienced depression in the posttest was no depression, 8 respondents (53%) and the lowest level of depression was mild depression, 7 of the respondents (46.7%).

Bivariate Analysis Results

1. The Effectiveness of Progressive Muscle Relaxation in Reducing Depression Levels in the Work Area of a Muslim Nursing Home

TABLE 3. Effectiveness of Progressive Muscle Relaxation on Reducing Depression Levels in the Work Area of the Muslim Nursing Home in December 2024 (n=15)

Depression Level	Pretest		Post-test		P value
	Frequency (f)	Percentage (%)	Frequency (f)	Percentage (%)	
Not Depressed	0	0%	8	53.3%	0.002
Mild Depression	8	53.3%	7	46.7%	
Moderate Depression	7	46.7%	0	0%	
Total	15	100.0	15	100.0	

The results of table 3 show that from 15 respondents. The results of the Wilcoxon test analysis of Progressive Muscle Relaxation (ROP) before and after ROP show that, if $p < 0.05$, progressive muscle relaxation therapy has an impact, with depression scores before and after being given ROP in the Muslim Nursing Home Working Area of 0.002. The above data show that H_0 is rejected. Progressive muscle relaxation therapy is not effective in reducing depression in the elderly in the Muslim Nursing Home Working Area.

Discussion

The research, conducted from December 16 to December 21, 2024, will be discussed in detail in this research discussion. This study was conducted at a Muslim Nursing Home. The Wilcoxon test was used to analyze the data obtained. The study aims to determine the effectiveness of progressive muscle relaxation therapy in reducing depression levels in the elderly in the Muslim Nursing Home's working area. The intervention group was assessed on the Geriatric Depression Scale (GDS) score before and after progressive muscle relaxation therapy was administered to respondents.

The results of the analysis that has been done with the Wilcoxon test analysis of Progressive Muscle Relaxation (ROP) before and after ROP show that, if $p < 0.05$, progressive muscle relaxation therapy has an impact, with depression scores before and after being given ROP in the Muslim Nursing Home Working Area of 0.002. The above data shows that H_0 is rejected Progressive muscle relaxation therapy is not effective in reducing depression in the elderly in the Muslim Nursing Home Working Area. The sample used in this study was 15 respondents without using a control group.

In line with research conducted by (Sumartyawati et al., 2021) in the Scientific Journal of Health Sciences Volume 7, Number 1, the results of statistical tests conducted using the Wilcoxon Signed Ranks test were obtained with a sig value (2-tailed) = 0.000 and $\leq \alpha 0.05$, so H_a was accepted and H_0 was rejected. At the Mandalika Elderly Social Center, NTB Province, this indicates that there is an effect of progressive muscle relaxation on changes in depression levels in the elderly.

Previous research conducted by (Ati et al., 2022) also showed a significant difference in depression scores in the elderly before and after progressive muscle relaxation therapy (p-value = 0.000). For the depression variable, 100% of the elderly decreased their depression scores after therapy compared to their scores before progressive muscle relaxation therapy.

During therapy, respondents showed a significant reduction in symptoms and signs of depression. After progressive muscle relaxation therapy, therapeutic

communication conducted by researchers significantly reduced depression in the elderly, involving muscle stretching, which has the ability to relax and aid recovery from depression in everyone. As part of the communication process, which consists of pre-interaction, orientation, working, and termination phases, researchers were able to build trust between respondents and researchers to help them express their feelings and overcome depression.

Regularly practicing progressive relaxation techniques can help reduce depression by focusing attention on muscle activity, identifying tense muscles, and then using relaxation techniques to reduce tension and relax the muscles. This is one way to describe progressive muscle relaxation therapy. This relaxation response is part of a general decrease in physiological, cognitive, and behavioral arousal. Beta-blockers can be produced in peripheral nerves during relaxation. These have the ability to close the sympathetic nervous system. This lowers blood pressure, reducing tension, depression, and anxiety.

Conclusion

The results of the analysis that have been carried out are using the Wilcoxon test, Progressive Muscle Relaxation (ROP) before and after progressive muscle relaxation is said to be effective if $p < 0.05$ is obtained p value 0.002. So it can be concluded that H_0 is rejected Progressive muscle relaxation therapy is effective in reducing the level of depression in the elderly in the Muslim Nursing Home Work Area. This study still found several problems that need to be fixed, and further researchers can consider these things to improve this study.

Suggestion

Progressive muscle relaxation (ROP) can be a highly beneficial intervention for improving the mental health of older adults in nursing homes. Given that older adults often face psychological challenges such as depression, anxiety, and stress, this relaxation program is expected to significantly reduce depression levels and improve their quality of life.

These researchers recommend using an updated, purely experimental method for further research. To this end, they used a control group as a comparison group. Performing this progressive muscle relaxation therapy regularly will prevent boredom for the elderly living in nursing homes. Researchers can also consider the physical condition of the respondents, as those with poor physical condition will have a harder time responding to the relaxation effects of progressive muscle therapy.

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