



The Effectiveness of Autogenic Relaxation-Based Distress Management Therapy in Reducing Anxiety Among Older Adults with Chronic Diseases

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DOI: 10.33086/mtphj.v10i1.7873

Article History:

Received, August 25th, 2025

Revised, November 16th, 2025

Accepted, January 02nd, 2026

Available Online: March 17th, 2026

Please cite this article as:

Astutik, Nanik Dwi & Yustina Emi Setyobudi, "The Effectiveness of Autogenic Relaxation-Based Distress Management Therapy in Reducing Anxiety Among Older Adults with Chronic Diseases" Register: *Medical Technology and Public Health Journal*, Vol. 10, No. 1, pp. 81-89, 2026

ABSTRACT

Aging is an inevitable biological process marked by a gradual decline in physiological function. This decline affects various organ systems, including the cardiovascular, musculoskeletal, and nervous systems, and is accompanied by a reduced regenerative capacity, often leading to chronic diseases. The prevalence of chronic illness in individuals over the age of 65 is significant, reaching 60-70%. Anxiety frequently arises in older adults with chronic illnesses due to uncertainties about disease progression, dependence on caregivers, fears of death, and financial burdens associated with medical expenses. To aid older people in managing stress and anxiety, interventions such as autogenic training (AT) and relaxation therapy can be effective. This research employs a quantitative approach with a Pre-Experimental design, utilizing a one-group pre-post test methodology. This design includes an initial observation (pre-test) to evaluate changes following the intervention (post-test). The study involves primary data collected from 70 older adults participants who meet the inclusion criteria. The research instrument incorporates autogenic therapy procedures and employs the Hamilton Anxiety Rating Scale (HARS) to assess anxiety levels. Data analysis is conducted using the Wilcoxon Signed Rank Test. The results reveal a significance value (p-value) of $0.000 < 0.05$, indicating a statistically significant difference in anxiety levels before and after the implementation of autogenic relaxation-based distress management therapy. The negative Z value (-7.124) signifies a reduction in anxiety scores among the older adults following the intervention. Therefore, older adults individuals with chronic diseases who experience anxiety are encouraged to engage in autogenic relaxation exercises to alleviate their anxiety.

Keywords: Elderly, Autogenic Relaxation, Anxiety, Chronic Illness.

INTRODUCTION

Aging is an inevitable biological process marked by a gradual decline in the body's physiological functions (Maghfuroh et al., 2023). This process encompasses changes across various organ systems, including the cardiovascular, musculoskeletal, and nervous systems, as well as diminished regenerative capacity. In addition to physical transformations, older adults

often encounter cognitive and psychological shifts, such as memory decline, slowed cognitive processing, and an increased susceptibility to mental health issues like depression and anxiety. Socially, older adults frequently experience isolation, limited societal roles, and diminished social interaction due to retirement, the loss of a spouse, or changes in family dynamics (Muliani et al., 2024).

Issues concerning the older adults in Indonesia are gaining prominence as the population ages rapidly. According to data from the Central Statistics Agency (BPS), by 2023 the number of individuals aged 60 and above is projected to surpass 30 million, representing approximately 11% of the total population (BPS, 2023). Demographic forecasts suggest that Indonesia is on the brink of becoming an aging society, with the proportion of older adults citizens expected to exceed 14% of the total population (BPS, 2023).

A region is considered to have an aging population when the percentage of older adults reaches 10% or more (Cicik & Agung, 2022). In 2023, national data indicate that approximately 11.75% of Indonesia's population falls into the older adults category (Geriatric.id, 2024b). East Java, in particular, has a significant older adults population, with 15.57% of its residents aged 65 or older in 2023. In Malang city, this percentage stands at 13.02% of the total population. Furthermore, in Malang Regency in 2024, the number of older adults residents aged 60-75 and older totaled 195,680 men and 210,140 women (Central Statistics Agency of Malang Regency, 2025). The older adults are especially vulnerable to various chronic diseases, with respiratory conditions such as pneumonia, tuberculosis, COPD, asthma, and lung cancer being among the most commonly experienced health issues in this demographic (Geriatric.id, 2024a).

Data from the Indonesian Basic Health Research (RISKESDAS) indicate that chronic disease patterns in the older adults align with global trends. However, they are compounded by issues such as malnutrition and limited access to healthcare (Taufiq, 2024). Hypertension emerges as the most prevalent chronic disease among older adults, with a striking prevalence of 60-70% among those aged 65 and over, according to population-based studies (Fiana & Indarjo, 2024). This condition is often linked to blood vessel rigidity stemming from aging and a sedentary lifestyle. Additionally, mortality rates from heart disease remain alarmingly high, with approximately 650,000 fatalities annually (Yonatan, 2024). Risk factors such as dyslipidemia, type 2 diabetes mellitus, and abdominal obesity further exacerbate the prognosis (Arisudhana et al., 2024).

In Malang City, hypertension ranks as the most common chronic illness among the older adults. According to the 2020 Malang City Health Profile, it ranked among the ten most prevalent diseases, with 35,641 reported cases, representing an 18% prevalence rate predominantly affecting older adults (Pherenis et al., 2023). Furthermore, a study in the area indicated that a significant proportion of older adults with chronic diseases experience multimorbidity, meaning they suffer from more than one chronic condition, heightening the risk of polypharmacy (the concurrent use of multiple medications). In this study, 54.4% of older adults participants did not engage in polypharmacy, while the remainder did. Most individuals experiencing polypharmacy were either pre-frail or frail; however, no statistically significant relationship was found between polypharmacy and frailty (Nabiha & Kartika, 2024). In addition to hypertension, insomnia is also reported by almost half of the older adults population in Malang City (Pherenis et al., 2023).

In 2024, data from Gunungronggo Village indicated that there were 80 individuals suffering from hypertension, 38 from diabetes mellitus, and 18 who experienced both conditions (Village Nurse Primary Data, 2024). Hypertension has emerged as a significant chronic illness

among the older adults in Gunungronggo Village. Results from examinations conducted at the older adults Posyandu (Integrated Health Post) revealed that a majority of older adults residents had blood pressure readings exceeding the normal range, highlighting a high prevalence of hypertension in the area. Programming at the older adults Posyandu focused on the importance of self-care practices for managing blood pressure and preventing hypertension-related complications. However, despite engaging in appropriate self-care behaviors, many older adults still displayed elevated blood pressure levels (Sakti et al., 2025).

Chronic illnesses not only impact physical health but also have profound psychological effects. Anxiety among older adults with chronic diseases often stems from several factors, including uncertainty about disease progression, reliance on others, fear of mortality, and financial strain related to medical expenses. Prolonged stress can exacerbate health issues, diminish quality of life, and even hasten disease progression. Psychologically, older adults with chronic illnesses may resort to maladaptive coping strategies, such as rumination or avoidance (Wisnusakti & Sriati, 2021).

Effective interventions are essential for helping older adults manage stress and anxiety. One such strategy to address anxiety in the older adults is Distress Management Therapy, which includes the Autogenic Relaxation technique (Musyiami et al., 2020). Developed by Johannes Heinrich Schultz in the early 20th century, this method emphasizes self-suggestion to achieve a state of deep relaxation (Schultz & Luthe, 1959). The technique involves focusing on specific physical sensations—such as warmth and heaviness in various body parts—while mentally repeating suggestive phrases. Through practices such as focused breathing and guided imagery, Autogenic Relaxation helps calm the sympathetic nervous system, which triggers the "fight or flight" response. It activates the parasympathetic nervous system, which promotes relaxation (Kanji, 1997).

Anxiety among older adults with chronic illness is a complex issue that necessitates a holistic approach. Autogenic Training offers an effective, non-invasive method for stress management that can be seamlessly integrated into daily care routines. With appropriate training, older adults can develop self-regulation skills to mitigate the negative effects of stress, ultimately enhancing their overall quality of life. The efficacy of this technique is backed by neurophysiological evidence demonstrating its influence on the autonomic nervous system. Consistent practice of autogenic training can increase alpha wave activity in the prefrontal cortex, which is associated with a state of alert relaxation. Additionally, biomedical research indicates that this practice can lower stress hormones such as cortisol and adrenaline while enhancing heart rate variability (HRV), a marker of parasympathetic balance (Ahmed, 2022).

Numerous previous studies have shown that Autogenic Relaxation effectively reduces stress, anxiety, and sleep disturbances, while also enhancing emotional stability (Jocić, 2024). However, research specifically focusing on older adults with chronic illnesses, particularly in Indonesia, remains quite limited. Given the background of anxiety issues among the older adults and the potential of autogenic relaxation as a non-pharmacological intervention—characterized by its affordability, ease of implementation, and minimal side effects—researchers are keen to conduct a study evaluating the effectiveness of autogenic relaxation-based distress management therapy in alleviating anxiety in older adults with chronic illnesses.

METHODS

This study employed a quantitative pre-experimental design with a one-group pre-post test. The population consisted of all 84 older adults residing in Gunungronggo Village, Tajinan District, under the jurisdiction of the Tajinan Community Health Center (Puskesmas) in Malang Regency. Inclusion criteria required participants to be 60 years or older, experiencing anxiety, possessing no cognitive impairment (as indicated by a Mini-Mental State Examination (MMSE) score of 24-30), and not suffering from complications related to chronic diseases, such as altered consciousness. A sample size calculation using the Slovin formula determined the minimum sample size to be 70 respondents. Participants were randomly selected using a simple random sampling technique, specifically by shuffling to identify which older adults would be included. A list of older adults members within the population was utilized to finalize the sample. The independent variable in this study is autogenic relaxation therapy.

The dependent variable in this study is the anxiety levels of older adults with chronic diseases. Data collection was conducted systematically through three primary stages: the pretest stage, where researchers measured the respondents' anxiety levels using the Hamilton Rating Scale for Anxiety (HARS) questionnaire before administering autogenic relaxation therapy; the intervention stage, which involved providing autogenic relaxation therapy; and the posttest stage, where the anxiety levels of respondents were measured after the therapy was completed. This approach was utilized to assess changes in anxiety levels before and after the intervention of autogenic relaxation therapy. Primary data was collected directly from the respondents, while autogenic relaxation therapy was administered by the researchers following established therapeutic procedures. It is important to note that researchers were not required to possess special expertise in performing the therapy; the key was adherence to the prescribed procedures for administering autogenic relaxation therapy. Secondary data were obtained from the Tajinan Community Health Center in Malang Regency, derived from existing documents and obtained through consultations with the older adults program holder.

The instruments utilized in this study included autogenic relaxation therapy procedures and the Hamilton Anxiety Rating Scale (HARS). Autogenic relaxation therapy comprises relaxation techniques that involve deep breathing exercises, concentration, and self-suggestion. Each session lasts 15-20 minutes and is conducted twice daily over 12 sessions. The Hamilton Anxiety Rating Scale (HARS) was employed to evaluate respondents' anxiety levels both before and after the implementation of autogenic relaxation therapy. Anxiety levels were classified based on the obtained scores: no anxiety (score <12), mild anxiety (scores 14-20), moderate anxiety (21-27), severe anxiety (28-41), and very severe anxiety or panic (42-56). The HARS does not require validity or reliability testing, as it is a standardized measure of anxiety levels. The validity of the Hamilton Anxiety Rating Scale was confirmed using the corrected item-total correlation test, yielding positive values greater than 0.05, with a validity range of 0.208-0.589. The scale's reliability was established with a Cronbach's Alpha of 0.793, indicating strong reliability (above the threshold of 0.6).

The data collected were analyzed using both univariate and bivariate methods. Univariate analysis provided descriptive statistics, while bivariate analysis employed the Wilcoxon signed-rank test to assess the effects of the treatment by comparing data collected before and after therapy. A p-value <0.05 indicated a significant difference in anxiety levels pre- and post-relaxation therapy. The study received ethical approval from the Health Research Ethics Committee of Hafshawaty Zainul Hasan Genggong University, which confirmed its feasibility and issued ethical certificate No. 714/KEPK-UNHASA/VII/2025.

RESULTS AND DISCUSSION

Table 1. General data characteristics

Variables	Frequency	
	(n) = 70	f (%)
Age		
45-59 years	0	0
60-69 years	40	57.1
70-79 years	20	28.6
80-89 years	10	14.3
Gender		
Male	25	36
Female	45	64
Education Level		
Elementary School	54	77.1
Junior High School	11	15.7
Senior High School	5	7.1
Diploma/Bachelor/Magister	0	0
Job		
Private	13	18.6
Housewives	23	32.9
Unemployed	14	20.6
Farm Laborer	7	10.0
Farmer	11	15.7
Factory Employee	2	2.9
Blood Pressure (mmhg)		
130/80-139/100	10	14.3
140/80-159/100	48	68.6
160/80-169/100	4	5.7
170/80-170/100	8	11.4
Marriage Status		
Married	70	100
Single	0	0
Duration of illness		
2-4 years	48	68
5-7 years	18	26
8-10 years	4	6
>10 years	0	0
Medication history		
Routine	57	81
Not routine	13	19

Table 2. General data characteristics

	Frequency	
	(n) = 70	f(%)
Types of Disease		
Diabetes Melitus	9	78.6
Hypertension	55	12.9
PPOK	6	8.6
Medication history		
Routine	52	74.3
Not routine	18	25.7
Anxiety level before treatment		
Mild anxiety	9	12.9
Moderate anxiety	19	27.1
Severe anxiety	38	54.3
Panic	4	5.7
Anxiety level after treatment		
No anxiety	9	12.9
Mild anxiety	27	38.6

	Frequency	
	(n) = 70	f(%)
Moderate anxiety	28	40.0
Panic	6	8.6

Table 3. Wilcoxon Signed Ranks Test Ranks

	N	Mean Rank	Sum of Ranks
Post-test anxiety - Pre test anxiety	Negative Ranks 60 ^a	30.50	1830.00
	Positive Ranks 0 ^b	.00	.00
	Ties 10 ^c		
	Total 70		

a. Post-test anxiety < Pre test anxiety

b. Post-test anxiety > Pre test anxiety

c. Post-test anxiety = Pre test anxiety

Test Statistics

	Post-test anxiety - Pre test anxiety
Z	-7.124 ^b
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

According to Table 3, the significance value (p-value) is 0.000, which is less than the 0.05 threshold. This finding indicates a significant difference in anxiety levels before and after the implementation of autogenic relaxation-based distress management therapy. The negative Z-value of -7.124 signifies a reduction in anxiety scores among the older adults following the therapy intervention. The phrase "Based on positive ranks" suggests that the majority of the data reveals a decrease in anxiety levels (post-test < pre-test), and this finding is further supported by the highly significant Z-value.

DISCUSSION

The study's results revealed that prior to the intervention, a significant number of older adults (54.3%) experienced severe anxiety, particularly among women and those aged 60 to 69 years. Most respondents had low levels of education, primarily having completed only elementary school. Many were either unemployed or homemakers. Severe anxiety was also noted in older adults patients with high blood pressure (values of 140/80–159/100 mmHg) who had been living with the condition for three to four years. Despite regularly receiving treatment, these individuals still felt unwell.. These findings are consistent with previous studies, such as those by Wahyuni (2021), which indicated that 60% of older adults with chronic illnesses experience severe anxiety, as well as research by Fitriani et al. (2020) and Handayani & Susilo (2020). The study highlights that factors like gender, educational background, and perception of illness significantly influence anxiety levels in the older adults. Additionally, high blood pressure is closely linked to emotional well-being (Rahmawati & Hartini, 2021), and prolonged illness can diminish psychological resilience (Hidayati, 2019).

Even though many respondents have undergone regular treatment, anxiety levels remain elevated due to a lack of confidence in the therapy's effectiveness (Nugroho, 2020) and uncertainty regarding the prognosis of the often hidden nature of hypertension (Pratiwi & Nugraha, 2022).

Researchers contend that the intricacy of anxiety in the older adults arises not solely from medical conditions but is also shaped by psychosocial, educational, and spiritual factors. Consequently, autogenic relaxation-based distress management therapy may serve as a crucial non-pharmacological approach to holistically addressing anxiety. This finding indicates that factors such as gender, education level, and perceptions of illness significantly impact anxiety levels among older adults. Additionally, there is a strong correlation between high blood pressure and emotional well-being (Rahmawati & Hartini, 2021; Hidayati, 2019), while long-term illness may diminish psychological resilience (Hidayati, 2019). Despite many respondents receiving regular treatment, anxiety levels remained elevated due to a lack of confidence in the therapy's effectiveness (Nugroho, 2020) and uncertainty regarding the prognosis of the often hidden aspects of hypertension (Pratiwi & Nugraha, 2022).

Researchers suggest that the complexity of anxiety in older adults arises not only from medical conditions but is also shaped by psychosocial, educational, and spiritual factors. Consequently, autogenic relaxation-based distress management therapy can serve as a significant non-pharmacological approach to addressing anxiety holistically and sustainably for older adults with chronic illnesses. Following autogenic relaxation training, study results indicated a decline in anxiety levels among the majority of older adults participants, with initial severe anxiety (54.3%) decreasing to moderate anxiety (40%) and mild anxiety (38.6%). This finding demonstrates that autogenic relaxation-based distress management therapy is effective in alleviating anxiety among older adults with chronic health issues. The fundamental principles of this technique are rooted in psychophysiological concepts that link mental processes to the body's autonomic responses. Schultz (1959) observed clinically that hypnosis often triggers physiological changes, such as peripheral vasodilation and reduced muscle tension. The efficacy of this technique is further supported by neurophysiological findings that illustrate its impact on the autonomic nervous system. Regular autogenic training can enhance alpha wave activity in the prefrontal cortex, which correlates with a state of alert relaxation. Additionally, biomedical research indicates that this practice can reduce stress hormone levels, such as cortisol and adrenaline, while increasing heart rate variability (HRV), a marker of parasympathetic balance (Ahmed, 2022).

Autogenic relaxation can serve as an effective non-pharmacological approach in geriatric nursing practice. This technique is particularly beneficial for individuals dealing with stress, anxiety, physical pain, high blood pressure, depression, or feelings of loneliness (Subiyakto & Ariyani, 2024). Although autogenic relaxation can be applied to various adult age groups, most research and implementation focus on older adults, typically those aged 60 and above (Triprabowo et al., 2023). Studies on distress management therapy using autogenic relaxation have demonstrated positive outcomes for older adults patients with chronic illnesses, particularly in the areas of pain management and anxiety reduction. By employing this technique, patients can experience greater calmness and relaxation, ultimately enhancing their quality of life, especially for those with chronic conditions or those recovering from surgery. Overall, autogenic relaxation stands out as a safe and effective non-pharmacological nursing intervention applicable to a wide range of patient needs.

CONCLUSION AND SUGGESTION

Autogenic relaxation-based distress management therapy was effective in reducing anxiety levels in older adults with chronic illnesses. This suggests that this intervention can be used as a beneficial non-pharmacological approach in nursing practice, particularly in geriatric

nursing.. Suggestions for further researchers, research can be expanded by combining autogenic relaxation with other techniques, to produce more effective results in addressing various health conditions in the elderly, especially those related to stress, anxiety, and pain. Autogenic relaxation therapy is used as a potential complementary therapy when combined with other interventions. Furthermore, research could be conducted in various settings, such as treatment rooms, to assess the effectiveness of autogenic relaxation in different contexts.

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